

TECHNOLOGY DEPT

AMERICAN BUILDER

PUBL LIBRAR
DE 12 1942
DET T

DECEMBER, 1942

PRICE 25 CENTS

30 CENTS IN CANADA

WORLD'S GREATEST
BUILDING PAPER

AND BUILDING AGE

... To Washington Officials and MEMBERS of the NEW CONGRESS

... Homes for war workers are a vital essential to the war effort. Yet, home building is the one industry in which the power of private enterprise has not been effectively harnessed to produce a needed war product.

... On the contrary, thousands of private builders in war areas where housing is in a critical state are confused, discouraged and no longer able to operate.

... The production genius and drive of private initiative have been smothered. This need not be.

... This issue calls to your attention what builders have done, what they are capable of doing, and what steps must be taken to enable them to produce efficiently the war housing needed in 1943.

—The Editors



WHAT 1942 CAN
TEACH 1943 ABOUT
HOME BUILDING

NEW ROOMS OUT OF WASTE SPACE—FAST! WITH WHITE ROCK GYPSUM WALL BOARD



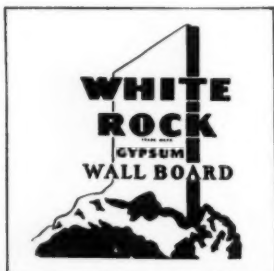
Meets Owners' Demands for Fast Completion! Won't Warp, Contract, or Expand!

CONTRACTORS are hearing the same thing in so many crowded war production areas: "We've got to have more living quarters for war workers—right now!" And that demand is being met, in case after case, with White Rock Gypsum Wall Board.

This tested product handles easily, goes up fast, stays put! It won't warp, contract, or expand. And it makes beautiful walls and ceilings,

ready immediately for painting or papering. Ideal for fireproofing framing members.

White Rock Gypsum Wall Board is readily available now at your Celotex dealer's, in all regular sizes, and in thicknesses of $\frac{1}{4}$ ", $\frac{3}{8}$ ", and $\frac{1}{2}$ ". Go to your Celotex dealer and get the facts about all Celotex gypsum products. He'll do everything in his power to help you get those emergency jobs done in a hurry!

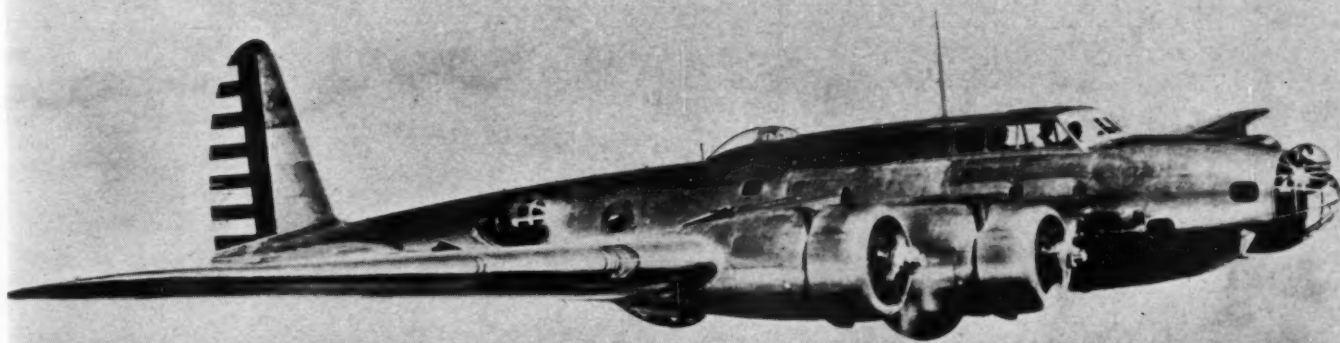


The word Celotex is a brand name identifying a group of products marketed by The Celotex Corporation. In certain territories gypsum lath, sheathing, wall board and liner board are sold by The Celotex Corporation as selling agent and not as principal.

THE CELOTEX CORPORATION • CHICAGO

Published monthly by Simmons-Boardman Publishing Corporation, 105 W. Adams St., Chicago, Ill. Subscription price, United States, Possessions, and Canada 1 year \$2.00; 2 years, \$3.00; foreign countries: 1 year, \$4.00; 2 years, \$7.00. Single copies, 25 cents. Entered as second class-matter Oct. 11, 1930, at the Post Office at Chicago, Illinois, under the act of March 3, 1879, with additional entry as second-class matter at Mount Morris, Illinois. Address communications to 105 W. Adams St., Chicago, Ill.

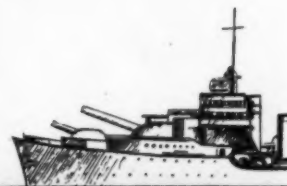
Bombers over Berlin!



TO HELP PUT AS MANY THERE
AS WILL CRUSH THE CORE OF
THE AXIS POWERS FOR ALL
TIME, IS THE PREDOMINATING
PURPOSE OF BRADLEY'S ALL-
OUT PRODUCTION OF WOOD
PRODUCTS FOR WAR.

U. S. ARMY AIR CORPS PHOTO

BRADLEY LUMBER COMPANY *of Arkansas*
WARREN, ARKANSAS



★ BUY UNITED STATES WAR SAVINGS BONDS ★



The bonds a well-built house pays for

The Turners' bank would tell them they are the steadiest customer in the U.S. War Bonds office. They are on Elm Street. The bank would say they are the best customer in the city. It has brass...rust-proof has Mr. Turner's copper gutter, do...flushing. It has

Hats off to
these unsung guardians
of your health



Copper and brass are needed to help make this war a bigger armory. The competition will make sure for the victors that who's left for the money and most of all, that the material goes for which there are no artificial substitutes.

Know this your plumbing contract is yours from exposure. When you have an emergency in need of Copper and Brass, American Brass and Copper Company is carrying on today and every day—the same efficient service that procured the pipes, plumbing, that joined the war for copper today, and made long-lasting equipment that is still available to repair most of our homes.

Amalgams made by working with combined activity for victory—in the same time lasting nothing but Copper and Brass—will stand in the peace-time future.

THE AMERICAN BRASS COMPANY
NEW YORK OFFICE: 100 West 42nd Street
NEW YORK 18, N.Y.
CHICAGO OFFICE: 100 West Madison Street
CHICAGO 24, ILL.
CINCINNATI OFFICE: 100 West Vine Street
CINCINNATI 2, OHIO

Copper & Brass

CIRCULATION BUREAU DATE OF MAY 26, 1955

Lucky Mrs. Wilson...especially on Mondays

...when she has to
work...whiter laundry...crystal-
reveling showers...On Mon-
day...it is, and thanks to
dapper control, the task will continue.
Director want you
shaps plans and tasks, and
with the plant that produce
are now waiting entirely
America's war needs. The
kind of research that
development as well as
the led to co-
month.

[illegible]

Today and Tomorrow
need help with the
Unlearned of quantities
of these vital metals are re-
quired for ammunition, for

Anaconda Copper & Brass

MADE IN THE U.S.A. CIRCULATION 100,000 COPIES OF ADVERTISING

Quartermaster to the American Home

[illegible]

Anaconda Copper & Iron

Contribution

The desire for comfortable and gracious living . . . so ably satisfied by you . . . has not dissolved in the crucible of war. It is being kept alive by such messages as you see here.

Reminded that copper and brass

The desire for comfortable and gracious living . . . so ably satisfied by you . . . has not dissolved in the crucible of war. It is being kept alive by such messages as you see here.

Reminded that copper and brass are vital to victory, Americans also are reminded of the economies and comforts these metals can bring them

Anaconda

[illegible]

For Profits TODAY

THIS TIME-PROVED NON-CRITICAL MATERIAL—AVAILABLE FOR INSTALLATION



Recommend Upson DUBL-THIK Fibre-Tile for all jobs where fresh modern appearance and lasting beauty are required.

FOR SAMPLE — MAIL THIS COUPON

THE UPSON COMPANY, LOCKPORT, NEW YORK

Please send us sample of Upson DUBL THIK FIBRE-TILE.

Name of Firm _____

My Name _____

Street Address _____

City _____ State _____

UPSON DUBL-THIK FIBRE-TILE

Be informed. Be ready. Don't miss out on necessary maintenance and repair jobs.

Keep them coming with this dependable material which you can sell and deliver with full assurance of customer satisfaction. *Other tile board* has all these advantages.

► **THICKER, STRONGER, STURDIER:** Made of tightly pressed fibres with tile indentations 4" square; not brittle nor spongy.

► **SIMPLE TO INSTALL:** Apply direct to studs in new construction . . . or right over plastered walls without furring using Upson No. 2 Floating Fasteners . . . invisible—nails to masonry surface. Panels 4' wide up to 14' in length.

► **PRODUCES PORCELAIN-LIKE BEAUTY:** Smooth, hard-finish surface for enameling in exact color customer wishes. For less and non-absorbent. Especially processed to eliminate need for sizing, and to provide extremely low painting cost.

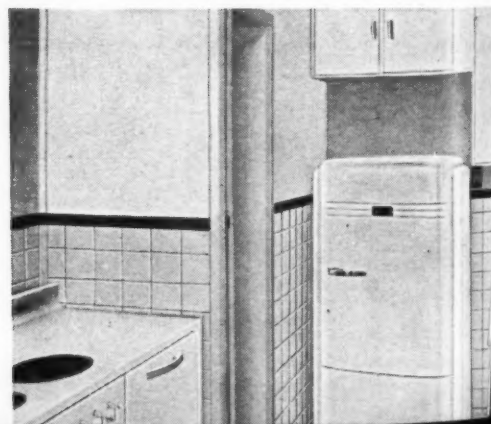
► **PROVED RECORD OF SATISFACTION:** Sold by thousands of dealers for years. Millions of feet now in use in bathrooms, kitchens, stores and shops. FHA Accepted.

Write or send coupon now for sample.



Upson Quality Products Are Easily Identified by the Famous Blue-Center.

Sufficiently economical for generous use in homes where cost is an important consideration.



EDITO
Build
to Sa

64th

AMEE
AGE
with w
Perma
nal, in
month

SIN
IN
Ad
Ne

Samu
Lee,
Crane
retary
tary;

Subse
posse
years,
2 vea
Addre
Manag

Field
I. H.
Willia
A. W.

Membr
(A. J.
Circ

AMERICAN AND BUILDING AGE BUILDER

64 YEARS OF CONSTRUCTIVE LEADERSHIP

CONTENTS FOR DECEMBER, 1942

Publisher's Page—Government Bungling vs. Private Enterprise —by Samuel O. Dunn.....	9
On and Off the Record.....	12
Looking Ahead to the Post-War Home.....	16
Letters from Readers.....	20
Editorial—Message to Washington.....	31
What 1942 Can Teach 1943—by Hugh Potter.....	32
Housing Record of Confusion, Delay, Misunderstanding and Red Tape Can Be Changed by Proper Administrative Steps.....	34
Better—Quicker—Cheaper.....	34
Private and Public Jobs in New Jersey Only a Few Blocks Apart—But What a Difference in Value, in Livability and Efficiency of Construction.....	36
We're the Suicide Troopers of the War Building Industry— by Fritz B. Burns.....	36
The Case for Private Building of War Housing Dynamically Stated by the Builder of Over 2000 Houses Since 1940.....	41
Ohio Builder Does His Best on War Housing.....	41
Power Equipment Speeds Big War Housing Job in Face of Serious Delays.....	42
Construction Industry Licensed Under MPR-251.....	45
Masonry for War Housing—by Frank W. Cortright.....	46
New WPB War Housing Standards.....	49
Prefab Methods Speed Seattle Housing.....	50
Title I Conversion Is Now Top Job for Builders—by E. H. Christy.....	52
Steel Sash; How to Repair and Re-Use—by John B. G. Mesker.....	56
4 Clever Colonials—One 21' x 31' Plan.....	58
Service to Readers.....	60
Getting Along with Less of Critical Materials.....	62
New Restrictions on Construction Machinery.....	64
Practical Job Pointers and Building Data.....	66
Mason Appointed Editor of American Builder.....	68
News of the Month.....	70
Index to Advertisers.....	88



EDITORIAL STAFF outlines American Builder's war and post-war program to Samuel O. Dunn, (center) publisher.

64th Year Vol. 64, No. 12

Founded Jan. 1, 1879.

AMERICAN BUILDER and BUILDING AGE (Originally "Carpentry and Building"), with which are incorporated National Builder, Permanent Builder and the Builder's Journal, is published on the first day of each month by the

SIMMONS-BOARDMAN PUBLISHING CORPORATION, 105 West Adams Street, Chicago, Illinois
New York Office: 30 Church Street

WASHINGTON, D. C.
National Press Building

CLEVELAND, OHIO
Terminal Tower

SEATTLE, WASH.
1038 Henry Building

SAN FRANCISCO, CAL.
300 Montgomery Street

LOS ANGELES, CAL.
530 West Sixth Street

Samuel O. Dunn, Chairman of Board; Henry Lee, President; Robert H. Morris, J. S. Crane, Vice-Presidents; Roy V. Wright, Secretary; Elmer T. Howson, Assistant Secretary; John T. DeMott, Treasurer.

Subscription price in the United States and possessions and Canada, 1 year, \$2.00, 2 years, \$3.00; foreign countries, 1 year, \$4.00, 2 years \$7.00. Single copies 25 cents each. Address H. E. McCandless, Circulation Manager, 30 Church Street, New York, N. Y.

Field Staff: C. L. Conley, J. H. Free, Ralph I. Henry, Jack Human, Woodrow James, William L. Taylor, Dick Whittington, George A. Wright.

Member of the Associated Business Papers (A. B. P.) and of the Audit Bureau of Circulations (A. B. C.) PRINTED IN U.S.A.

JOSEPH B. MASON
Editor

ROBERT H. MORRIS
Business Manager

ROBERT E. SANGSTER BERNARD L. JOHNSON PAUL WATSON
Managing Editor Western Editor Associate Editor

DOLA PARR LYMAN M. FORBES JOE SANDERS L. E. ARENT
Associate Editor Research Editor Marketing Editor Art Editor



...with Readily Available Gold Bond Materials

THERE are plenty of jobs waiting to be done right now! People are partitioning off rooms in attics and other places to ease the housing shortage. Insulation is being used to save fuel. Repairs are being made to keep houses livable. Plant and office layouts, too, are changing all the time.

Gold Bond Exterior Board, 1" Solid Partition Panels and Gypsum Roof Plank were developed to meet the government's need for sturdy military and industrial buildings. They have already proved invaluable for speedy, low-cost construction. Smart job contractors are using them with equal success in remodeling and repairing factories and offices. Get your share of this profitable business.

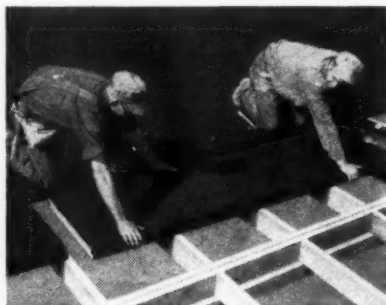


BUILD BETTER WITH
Gold Bond
Everything - for walls & ceilings

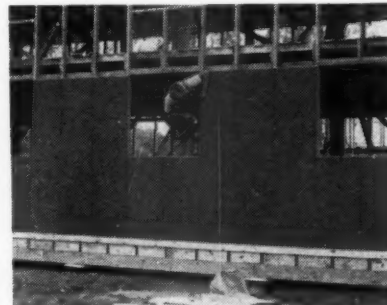
More than 150 different products for
**MODERN CONSTRUCTION
 AND WAR PRODUCTION**
 WALLBOARD...LATH...PLASTER...LIME
 METAL PRODUCTS...WALL PAINT
 INSULATION...SOUND CONTROL



Gold Bond 1" Solid Partition Panels are the answer where you are remodeling or rearranging plant and office layouts. You get solid, fast construction. No nails are used except to hold wooden mouldings in place. Panels can be completely salvaged when temporary structures are dismantled.



Gold Bond Gypsum Roof Plank is ideal for heavy-duty roofs on plants or farm buildings. It is permanent, weather-proof, fireproof. Quickly applied by any carpenter. Nails to wood joists. Requires no metal attachments. Perfect base for built-up roofing . . . no waiting for materials to dry!



Gold Bond Exterior Board is a combination sheathing and siding, which really saves workers' time. Extra-thick gypsum board with durable overcoat of asphalt roofing. Comes in large sizes, covering up to 20 square feet in one operation. Sturdy, rigid, permanent finish.

NATIONAL GYPSUM COMPANY . . EXECUTIVE OFFICES, BUFFALO, N. Y.

21 Plants from Canada to the Gulf . . . Sales offices in principal cities

Publisher's Page

Government Bungling vs. Private Enterprise

THE MOST VITAL war and post-war *economic* issue before our people is that of government totalitarianism and inevitable *centralization* versus private enterprise and *decentralization*.

The *American Builder* is concerned with problems of the building industry; but experience in another and widely different field throws light on the broad question of policy presented. No American industries are more contrasted than our building and railroad industries. The building industry consists of innumerable local units; the railroad industry principally of a few very large units requiring close co-ordination for national efficiency. And yet railroad experience during the last and present wars has afforded one of the most powerful arguments available against needless centralization.

In the last war government told the railways not only *what* it wanted done, but *how* to do it; it went the limit of centralization in 1918 by adopting government operation. And in 1918 the railways rendered only 12 per cent more freight service and 23 per cent more passenger service than two years before. In the present war period thus far government, allowing continuance of private operation, has told the railways what it has wanted done, but has *let them decide how to do it*. And in 1942 the railways have rendered about 75 per cent more freight service and 100 per cent more passenger service than two years ago—relatively *six times* as large an increase in freight service and *five times* as large an increase in passenger service as during the last war.

What this *railroad experience* forcibly emphasizes is that a few men in Washington, however able, cannot possibly solve all the problems, national *and* local, of *any* great industry as well as can thousands of able men throughout the country with knowledge of both national *and* local conditions—provided these thousands of men are given opportunity and incentive to use their knowledge, initiative, resourcefulness and driving force.

Of all industries, this is most true of one normally so local and decentralized as the building industry. The more you unnecessarily centralize control and direction of such an industry, the more you are certain to curtail its *actual* as compared with its *possible* accomplishments.

As shown by Hugh Potter in an article elsewhere in this issue, this is just what has been occurring in the building industry. The private building industry in 1941 produced 620,000 houses. With need for greatly increased building, the private building industry in 1942 will produce only 300,000 houses, and government less than 150,000. Why? Centralized government planning, control and competition have destroyed the private home-building industry's efficiency. Government has tried to tell not only what it has wanted built, but how to get it built, and has even itself tried largely to do the building. It couldn't be adequately done as centralized government bungling planned and directed; consequently, it hasn't been done.

This is an old story that has had to be told every time government has tried to supplant or direct private enterprise in any industry—always a story of excessive centralization, innumerable overnight changes in the rules of the game, confusion, needless delays and ruinous needless expense. More than a dozen bureaus in Washington are planning for government building to supplant private building in the post-war period. How these planners have prevented adequate building during the war should not be forgotten after the war.

Samuel O. Drumm,

How to turn a hull into a hornet's nest

THE EFFICIENCY of an aircraft carrier depends upon power—steam power to propel it, electric power to operate it.

Powering these sea-going airfields is a typically *Westinghouse* kind of war-time job. It is a job that calls for the thousand and one different skills in things electrical that are second nature to Westinghouse.

Here is just a small part of the equipment that Westinghouse has designed and built especially to make American carriers outstanding engines of destruction:

- ★ Steam turbines, compact in size, yet so powerful they drive our new carriers *faster* than any enemy carrier afloat.
- ★ Elevators big enough to hold a bomber, fast enough to deliver a plane to the deck with minimum delay.
- ★ Generators on each ship capable of producing enough electric power to light a city the size of Seattle.
- ★ Intricate radio equipment specially designed to stand up under the shock of battle.

Westinghouse "know how" is being applied—not only to aircraft carriers—but to nearly every type of ship in our Navy.

In this, as in all phases of Westinghouse wartime activity, the long-range work of our Research and Engineering Laboratories has played a significant part. Discoveries in many fields are now bearing fruit in the production of better and more powerful weapons of war.

Many of these discoveries, we believe, will someday help to make a better peacetime world.

Westinghouse Electric & Manufacturing Company, Pittsburgh, Pa. Plants in 25 cities; offices everywhere.

This advertisement has been reviewed by Government authorities and contains no information of military value to the enemy.

Westinghouse

... making Electricity work for Victory



(right)
to exact

FOR
be du
nate
many

Brix
dural
ness
that
This
beco
the

Walls
their

MAKE THIS TEST -
Prove **BRIXMENT is BEST!**



1 Above: A cylinder of Brixment mortar (left) and a cylinder of mortar made with 50-50 cement and lime mortar (right). Both specimens were made at the same time, and subjected to exactly the same treatment. After curing for 30 days, $\frac{1}{4}$ " of water



2 was put into the tray and the cylinders were alternately frozen and thawed 15 times. Note in photo 2 that Brixment mortar remains intact, whereas the other mortar has crumbled badly. This simple test can be made in any ice-manufacturing plant.

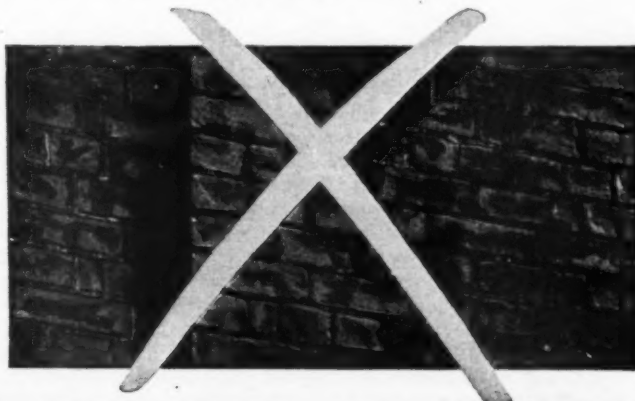
BRIXMENT Makes More DURABLE Mortar!

FOR permanent strength and beauty, mortar must be *durable*—must be able to withstand the alternate freezing and thawing to which it is subjected many times each winter.

Brixment mortar is *more durable*. This greater durability is due partly to the strength and soundness of Brixment mortar, and partly to the fact that Brixment is waterproofed during manufacture. This waterproofing helps prevent the mortar from becoming saturated—therefore protects it from the destructive action of freezing and thawing.

Walls built with Brixment mortar therefore *retain* their original strength and appearance. Even in

parapet walls and chimneys, where exposure is particularly severe, Brixment mortar will almost never require re-pointing.



BRIXMENT

For Mortar and Stucco

Louisville Cement Company, Incorporated, Louisville, Kentucky. Cement Manufacturers for Over-a Century.

On and Off the Record

by Structor

News, Views and
Comments

STOP AND GO—The past month has set a new high in government changes, regulations and stop and go orders. The rescinding of the AA-4 ratings for private war home building came as the final blow. Although WPB later agreed to resume processing of private jobs, this stop and go treatment was so severe that it drove still more able and aggressive private builders out of business.

WHAT HAPPENED—The WPB order stopping further issuance of priorities on privately financed war housing was issued just as members of the Home Builders Emergency Committee were meeting in Washington with top government officials to work out details of the new construction standards.

In attendance at the two-day meeting were Blandford, Kahler, Ferguson, Sullivan Jones, Draper and other top housing officials. On the first day of the meeting it looked as though private builders were going to be able to go ahead with reasonable success, and a high degree of co-operation was shown by the government officials.

On the second day, however, the meeting was abruptly knocked into a cocked hat by the sudden WPB stop order, apparently issued without Blandford's knowledge.

BLANDFORD PROGRAM UPSET—The WPB stop order obviously put Blandford in an unhappy position as it completely upset the carefully laid out program he had presented to Congress and to all war agencies. He has frequently said that private builders were to be counted on to produce at least 270,000 of the needed war housing units.

The sudden order kicked private builders out of the picture and left public agencies to do the whole job. WPB officials appeared to be ignoring Blandford's program, and in addition were most inconsistent in taking such violent action in contradiction of their own previously announced program.

AGGRESSIVE ACTION BY N.A.H.B.—Home builders of the country should recognize the aggressive job that was done by Frank Cortright, Hugh Potter and officers of the National Association of Home Builders in getting the WPB's freeze of private home building altered.

The protest was taken to Donald Nelson and to top officers of the government and of Congress. And the House Public Buildings and Grounds Committee immediately announced a hearing to determine whether the WPB order was not definitely contrary to the concept of the Lanham Act, which is that public funds shall not be used for war housing in communities where private builders are able to do the job. However, before the meeting took place WPB rescinded the order and agreed to resume processing of priorities for private war homes under the new construction standards.

BEHIND THE ORDER—An influential group of men in WPB apparently feel that the bulk of war housing from now on should consist of small "stripped" structures, little more than huts, to be built in huge quantities with public funds. They were to have chemical toilets, dirt floors, kerosene lamps, pot-bellied stoves. No private builder would be responsible for such a structure.

What the government men apparently do not realize is that they cannot force American civilians to live in such structures. Yet there is considerable evidence to indicate that the reason the stop order on private building was issued was that a program to build thousands of such "hut" housing was, and may still be, contemplated.

Blandford and experienced officials of the various housing agencies have already found through experience that substandard housing doesn't work—civilian war workers simply will not live in them. WPB officials, faced with critical shortages of material, take the attitude that if soldiers can be forced to live in barracks, so can civilians. That is a subject with great ramifications, and involves the whole problem of drafting of civilian workers. Even if such a draft is approved by Congress, the question still remains whether civilians could be forced to live in substandard quarters against their will.

MORE CONFUSION—The Office of Price Administration's new regulation providing price control for construction jobs is another confusing and complicated order which will take a great deal of clarification. We wonder whether OPA fully realizes the hundreds of thousands of small jobs involved and the difficulty of explaining the order's complexities to thousands of small firms. There seems little sense to us in attempting to put a ceiling on contracts of this type.

POST-WAR DREAM—Some sage said that "man lives on memories of the past and hopes of the future," and that is what a lot of builders are doing right now. They will be interested in the statement by Abner Ferguson, FHA Commissioner, recently that we can look forward to "an almost unlimited need and demand for new housing in post-war America." There will be, he said, "a welled-up demand—with thousands and thousands of houses needing deferred repairs, and with a backlog of new houses estimated at from 900,000 to 2,000,000 a year." He called for modernizing of building operations with better capitalized companies and large scale operations.

NEW PRODUCTS TOO—It is certain that builders will have a wide choice of new and exciting products to use in building post-war homes. Bathtubs of plywood, aluminum, plastic or other light materials are talked about. Plastic pipe and hardware are said to be a possibility as well as lightweight metals and materials formed into larger sections to reduce labor at the site.

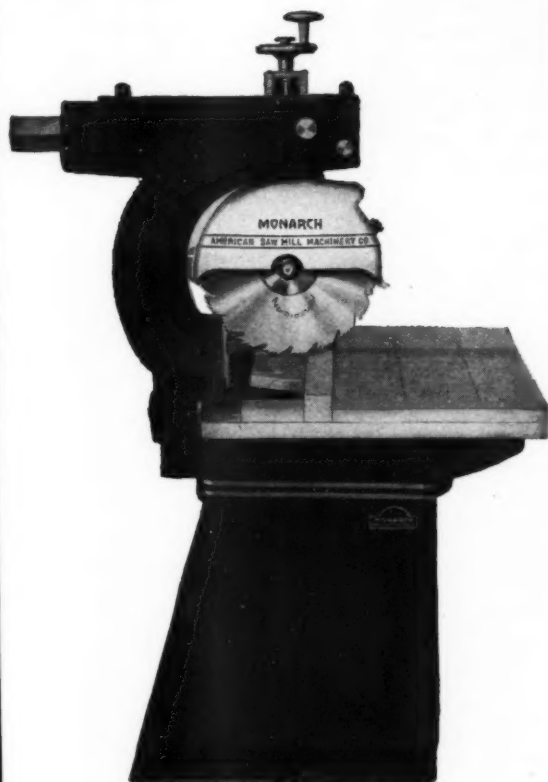
Almost every manufacturer has something new and exciting up his sleeve, but most are afraid to talk much about it yet because first, they say, every effort should be spent towards winning the war, and second, they don't want to make premature announcement of something that may not develop in a practical way.

Some of the consumer and architectural magazines and the newspapers are apparently not limited by such practical considerations, and have lately been predicting all sort of fantastic developments that will revolutionize home building. Since they are not hampered by much practical knowledge of the problems involved they can go the limit. The result will probably be that the American public will be oversold on what can be expected, and the whole industry will suffer, just as it has in recent years from wild-eyed predictions that have never materialized.

NOTHING TO GET! IN YOUR WAY!

Monarch Uni-Point Radial Saw's Telescoping Ram Leaves Work Table Free and Clear

Enjoy the wide open spaces above the table! No long arm to invite headon collisions or strike operator's shoulder. With ram and saw returned behind guide fence, work table is left free and clear.



And here's another great time saving feature of this marvelous modern machine: the UNI-POINT Saw always enters the work at same point in table, whether set for horizontal, vertical or compound miter cross-cut angle. Think what this means on a mass production job! No moving of material, stops or gauges. No need to raise or lower saw, or wait for saw to stop on cross-cut angle changes. Simply pivot or tilt, lock and start cutting. UNI-POINT stops automatically and accurately at all common positions.

And note: UNI-POINT locking levers are in "safety-zone" in front of and below table. No dangerous reaching over saw to make these adjustments.

For faster, more accurate production—whether army camp, housing project, industrial plant, shipyard or pre-fabrication construction—install these versatile UNI-POINT Radial Saws NOW and watch your output jump.

Write For Details

We also manufacture modern designed Saw Benches, Band Saws, Jointers, Planers, Lathes, Shapers, Mortisers, Sanders, Swing Saws and a complete line of Saw Mill Machinery. Send for Catalog 60.



AMERICAN SAW MILL MACHINERY CO.
HACKETTSTOWN, NEW JERSEY



Here's the "How-to-do-it" book for building men, another in a series of American Builder self-help books.

Are you on the outside looking in, when you might be the man who is bossing the job? **The Man Who Knows How** is the man who gets the best building jobs. He's never idle. He drives the best car and lives in a good house. You Can Be That Man! It's easy, because you can help yourself. Read and learn at home, or in your spare time. **House Construction Details**, by Nelson L. Burbank, is the book that can help you become **The Man Who Knows How**.

It makes no difference whether you are a student, a beginner, an experienced building mechanic who wants to become a contractor, a sub-contractor, or a seasoned, experienced builder. You will find a gold mine of ideas and useful information in **House Construction Details**. It is crammed with ideas, 1,500 illustrations, details and scale drawings, with short, clear explanations.

It's so easy to find what you want in **House Construction Details**, because it begins at the foundation and goes right through the whole process of building a house, step-by-step, clear through to painting and finishing. A very well-arranged cross-index helps you locate what you want. Look over the table of contents below and see how well the book has been arranged. This valuable self-help book is sold with a money-back guarantee of satisfaction.

Send the coupon today for your copy of "**House Construction Details**." With it you'll receive **FREE** the 1942 Book Guide—your guide to profitable reading.

FILL OUT THIS GUARANTEED ORDER FORM

American Builder and Building Age,
30 Church Street, New York, N.Y.

Enclosed find \$3.00 for which send me a copy of the New Second Edition of **House Construction Details**, and a copy of the American Builder Book Guide **FREE**. If I do not find the book entirely satisfactory I will return it within 5 days of receipt and you will refund my \$3.00.

Name

Address

City and State

A.B. 12-42

Contents of The New Edition

Floor Plans
Set of House Plans
Excavations
Foundation Forms
Foundations
Outside Walls
Inside Walls
Wall Sheathing
Ceiling Joists
Roof Construction
Bay Construction
Roofing
Cornices and Porches
Exterior Wall Construction
Interior Wall Coverings
Interior Trim
Stair Construction
Windows
Doors
Hardware
Closets
Shelves
Built-in Equipment
Finished Flooring

Chimneys and Fireplaces
Scaffolds
Garages
Heating
Air Conditioning
Elements of Electric Wiring
Insulation
Sound Proofing
Gates
Garden Furniture
Shoperafter's Corner
Camps
Cabins
Cottages
Farm Buildings
Wood Connectors
Pre-fabrication
Modern Building Materials
Painting and Finishing
Modern Homes
Index



A Declaration of Faith in Your Future — and Ours

CHICAGO
MINNEAPOLIS
OMAHA
KANSAS CITY
SALT LAKE CITY
LOS ANGELES
ST. LOUIS
MEMPHIS
ATLANTA
DETROIT
PITTSBURGH
PHILADELPHIA
BALTIMORE
WASHINGTON, D.C.



CABLE ADDRESS
"MUELLER-MILWAUKEE"

L. J. MUELLER FURNACE CO.
Heating and Air Conditioning

2005 W. OKLAHOMA AVENUE
MILWAUKEE - WIS.



H. P. Mueller,
President — the
third generation
of Muellers in
this 85-year-old
business.

To the Building Industry:

The chief thing that we have to sell to you today is our faith in the future of the building industry, and our belief that improved heating and air conditioning equipment must play an important part in that future.

We are engaged in a branch of the industry that has seen the curtailment of its normal efforts, the shutting off of many vital materials, the rationing of its products -- without complaint and with a willingness to do cheerfully anything necessary to make a contribution toward the all-out war effort which alone assures a future for any of us.

In the long view, when this great effort brings victory, it becomes merely an interruption in the history of progress. In our own case, we have lived through three major wars and several depressions during the past 85 years -- each time emerging stronger than before.

During World War I, the L. J. Mueller Furnace Company devoted almost 100% of its effort towards the production of material used in successful prosecution of the war.

In this war, we have made constant adjustments in an attempt to continue the production of our line of heating equipment where it would do the most good in the war effort, for defense housing, industrial plants, military barracks, etc.

We have also undertaken the manufacture of many items foreign to our regular line which are required by our armed forces. At the same time, we have expanded our research and engineering facilities for the further refinement and development of our line of heating products.

When peace comes, you will find us ready with a line that is right up to the minute and with a name that is well and favorably known to your clients. We are planning confidently to continue our pleasant relations with you, in the interest of a successful and mutually profitable post-war building program.

Sincerely yours,

H. P. Mueller
President

MUELLER *Milwaukee*
HEATING AND AIR CONDITIONING

Looking Ahead

To The Post-War Home

When America can again build freely, what will the new homes be like?

Miles Colean Expects Larger Operators to Dominate Market

Washington, D. C.

Editor Post-War Home:

There is no question in my mind that the potential housing market in the post-war years will be tremendous, making possible—provided industry can rise to its opportunities—an annual production of a million or more dwellings for at least a decade.

When I say "provided industry can rise to its opportunities," I mean that it must find a way of producing attractive and substantial dwellings at prices that will create a large mass demand. It is pleasant to listen to arguments that the post-war house can be a relatively expensive house because of a probably higher level of income and an overload of savings carried over from war activity. But it is exceedingly doubtful that the real income of individuals in relation to end-of-the-war price levels will be such as to permit a large volume of housing year after year except at comparatively low costs.

Thus the fact that the nominal price of a post-war house may be higher in relation to the pre-war price of the same type of house, the problem of producing a mass market house will be no easier for that reason alone. It may even be harder. Furthermore, the exigencies of post-war reconstruction abroad may result for a time in the continued shortage of important materials. Post-war housing will thus require all the ingenuity in planning, engineering, and industrial process that we can give it.

In order to meet this problem—in order to bring the maximum of efficiency and economy to house production—I am of the opinion that we shall need larger building organizations than characterized the housebuilding field during the thirties, and that these organizations will have to make extensive use of factory operations in the preassembly of parts of the structure. The processes of selling and financing will have to be similarly simplified and speeded up.

With all this, the house itself can be a more convenient, more comfortable, and more attractive place to live in, for there is no reason to doubt that, once accepted, factory methods and large scale production in housing will result in the same combination of increasing quality and decreasing prices that has occurred with radios and refrigerators, and other outstanding products of the industrial age.

MILES E. COLEAN, Vice President,
Starrett Brothers and Eken, Inc.,
Builders.

It Must Still "Look and Feel Like a Home"

Chicago.

Editor Post-War Home:

Homes will continue to be homes after the war and not merely shelters filled with convenience gadgets. In every man's mind the word "Home" forms a picture based on his innermost desires and is given shape by the home traditions of our country. He may be sold a house that looks like a new design for a soap box and it may contain every contrivance for comfort and effortless living. But it will not be home to him and the longings of his heart will never be satisfied while he lives in it. For it will not look like, feel like, nor have the spirit of the home he has known and loved since childhood, his ideal of

home—the "Home, Sweet Home" of America.

We shall build most successfully after the war if we realize that, to the typical American, home is the embodiment and realization of the dreams that motivate life, and these cannot be defied with impunity. With this premise—that the home of tomorrow must look and feel like an American home—there are few if any limitations to its architectural and scientific development.

The home of the future will undoubtedly be partially prefabricated. Except in the case of the cheapest dwellings, it will not be delivered to the lot ready to set up simply by tying its parts together. But certainly the irrational process of having craftsmen build every detail of the home at the site will be abandoned. Mass production can take its economic place in home building, as it has in everything else, but it probably will be mass production of parts. These may be selected by the owner and fitted into the general plan by the architect or builder.

There is every reason why manufacturers should produce for the post-war house various models of bathrooms, kitchens, heating systems, etc., which the owner of the projected home and his wife—particularly his wife—may select in showrooms as easily as they recently bought an automobile. The baths and kitchens can comprise fixtures, floors and ceilings, all designed and prefabricated together. Prefabrication will extend to other service rooms, such as the breakfast room and the laundry, and certainly to closets, which may be offered in models comprising built-in drawers, shoe racks, hangers for clothing, moth-resistant materials and efficient lighting. Prefabrication can also include such things as interior wall sections, particularly those with book shelves, ornamental shelves and brackets, cabinets, panels of wood or tiling and art glass; ceilings designed for concealed lighting; and mouldings of various designs.

All these things now largely built on the premises through custom fabrication can in the future be given the benefit of the same creative thinking that has placed the automobile years ahead of the home. The cost of fine designing, which few home owners can afford for every feature and facility of the home, should be absorbed by mass production. No individual craftsman can make any feature of an automobile comparable to that designed by the manufacturer and produced by machines. And so it should be with the prefabricated parts of the future home. They should afford greater beauty, utility and flexibility than the hand-made work of today. Around these mass-produced articles and features, all personally selected, the home can be built, the ultimate result being not a house of standardized sameness, but a home of the utmost individuality and beauty. And all this can be brought about, not through heavy expenditures but with the economies of mass production.

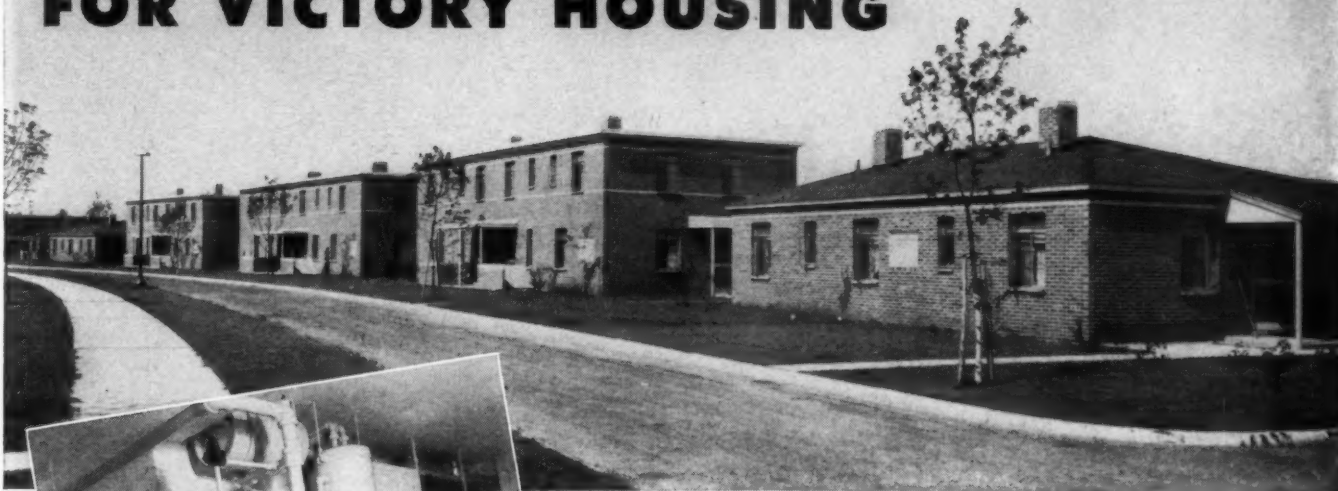
The laboratories of many industries are working on the improvement of the home and after the war will offer new materials, techniques, inventions, comforts and conveniences, better and less costly construction. The home will benefit directly from this research and indirectly from the research for war purposes. American genius is at work and it never yet has failed.

As to the cost of the home that may prove most popular in the post-war period, the trend since the "come-back" of home building in 1936 provides the best indicator. The average value of the new homes built in 1936 in the Chicago suburban towns

(Continued to page 78)

Heating

FOR VICTORY HOUSING



KEEPING American workers warm is an important job—for healthy, comfortable workmen mean bigger production of the materials of war.

In the Gary Housing Project, Crane No. 14 Boilers are proving their efficiency and economy in warming the homes of our defense workers.

The No. 14 is ideally suited for this job as its design makes it practical to install it in a utility room. A completely water-jacketed ash pit assures fuel economy—besides making it possible to place the boiler on a wooden floor with no special insulation needed.

The low cost, compact size and sturdy construction of the No. 14 won it a place not only in the Gary Housing Project but in many similar housing projects the country over.

CRANE

CRANE CO., GENERAL OFFICES:
836 S. MICHIGAN AVE., CHICAGO

VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS



*EVERY 10 MINUTES
EVERY DAY AND NIGHT...*

Another Building is Damaged or Destroyed by **ROOF COMMUNICATED FIRE!***



Right this minute, a burning brand is somewhere flying through the air . . . flying toward an inflammable roof. Ten minutes from now that brand will have started a fire that may mean serious loss of property and possible interference with our war effort.

That's why the fire protection of asbestos is invaluable during critical times. You can give this protection to your prospects by replacing inflammable, worn-out roofs with Johns-Manville Asbestos Shingles.

**J-M Asbestos Shingles Can't Burn—
Will Last 30 Years, Plus!**

Today, more than ever before, the fireproof and rotproof qualities of asbestos shingles make a

strong appeal to homeowners when they need to re-roof. The colorful beauty and American method appearance of the new J-M American Colonial Shingle, plus their unusually low cost, make your selling job easy. Millions of homeowners hear about them regularly on the popular J-M radio program, "Cecil Brown and the News."

They are easy to apply, too—no special skill required. For complete information, with samples and prices, write Johns-Manville, 22 E. 40th St., New York.

*The National Fire Protection Association has estimated that in 1940 (latest estimate available), 62,000 fires were caused by sparks falling on inflammable roofs.



JOHNS-MANVILLE

Asbestos Shingles



**Don't let cold weather
hold you up, either . . .**

With Lehigh Early Strength Cement you can
go ahead, full-speed, on needed concrete work

Now is no time to let cold weather interfere with building operations. The war is still on; necessary construction must proceed, full-speed.

As the picture shows, winter-time jobs *can* go forward—by the use of Lehigh Early Strength Cement. For with this cement, concrete comes to service strength in $\frac{1}{3}$ to $\frac{1}{2}$ the usual time. The danger of frost damage is *lessened*; heat-protection time is *cut*, its cost *reduced* . . .

. . . and, besides giving you

Lehigh
EARLY STRENGTH CEMENT
for service-strength concrete in a hurry

winter concrete at summer speed, your use of Lehigh Early Strength Cement cuts forms cost, coordinates construction schedules, permits earlier occupancy, helps meet contract obligations—*any time of year.*

The Lehigh Service Department will send you, free on request, data on the practices recommended for cold weather concreting with Lehigh Early Strength Cement. You are invited to send for this helpful information.

LEHIGH PORTLAND CEMENT COMPANY • ALLENTOWN, PA. • CHICAGO, ILL. • SPOKANE, WASH.

Letters

from Readers

*Facts, Opinion and Advice
Welcomed for This Dept.*

Kahler Agrees "It's Better to Build"

Washington, D. C.

To the Editor:

There are two thoughts in your November editorial, "Better to Build than Billet" which call for separate consideration, although they are tied together in the editorial.

The first is the appeal to private builders and private capital to do the job. With that we are in complete agreement. We have to rely upon private enterprise for its share of the 1943 housing program. Private enterprise should assume its responsibility in that connection not only to keep itself alive for the post-war task but also as its contribution to the war effort. Housing is an imperatively vital part of that effort.

The second thought is that new housing should be substituted for billeting. We agree with that also, but unhappily there are not available sufficient quantities of essential materials to satisfy, through the construction of new housing, the overwhelming need for housing. Whether we like it or not, we are driven to using existing housing facilities to the maximum.

But compulsory billeting is not an immediate prospect, and will not have to be resorted to if idle accommodations are voluntarily put to use where needed.

W. V. KAHLER, Chief
Bureau of Construction,
War Production Board

Military Necessities Dictate Building Policies

Washington, D. C.

To the Editor:

I have read the editorial, November *American Builder*, and, of course, agree that it is "Better to Build than Billet," just as I agree that it would be "better" for every motorist to have all the gasoline and tires he wants than to suffer the deprivations imposed by rationing.

The editorial appears to assume that many hundreds of thousands of additional homes could be built were it not for a "defeatist" attitude—presumably on the part of the War Production Board—and governmental "red tape." This is a question of fact, and not being in possession of all the relevant evidence, I am in no position to express an opinion.

I know from my own experience with many of them that American builders are patriotic, "inventive, aggressive and ingenious." But we are engaged in an all-out war effort in which primary consideration must be given to the military necessities. I have no information that this is not being done.

PHILIP B. FLEMING,
Brigadier General, U. S. A.
Administrator, Federal Works Agency

Method Condemned but Objective Endorsed

Knoxville, Tennessee

To the Editor:

It seems to me that your editorial, "Better to Build Than Billet," is not appropriate at this time. I am very much opposed to the forming of "Pressure Blocks" to protect their own selfish interests, rather than devote their entire effort to a furtherance of

the war effort regardless of who gets hurt. In my opinion it is neither patriotic nor wise, from an industry's position, to strive to obtain the building of \$3,000 to \$4,000 houses to give shelter to one war worker. It is far better to "billet them or barrack them" for the duration and leave this building of houses for a much needed market after the war is ended.

The only possible way our industry can justify the asking of any favors at this time is to adopt a program that will directly contribute to the winning of this war, and I believe that our industry can perform this needed function if it is properly led and advised. This program must be based on converting the facilities of most of our dealers to distributing lumber and other building material to war plants and government contractors. The essential civilian needs must be taken care of, but we should be honest in deciding what is essential and what is unessential. We as an industry must devote our thinking to developing means of housing war workers with less material, using less man hours.

I agree with you that all of the housing troubles cannot be laid to a shortage of materials, and it is my conclusion that the trouble has been largely brought about by the shortsighted policies and regulations of the OPA and WPB in not arranging price ceilings and other regulations in such a manner as to use the existing and much needed distribution facilities of the retail dealer in the war program.

It is not too late to correct these ill conceived policies, and if this is not done, the dealer can look forward to a gradual shrinking of his business and usefulness. This is not only true during the war period but will continue after the war, and the housing market referred to earlier in this letter, will almost entirely be taken over by a program of public housing.

R. O. BROWNEE, Sec'y-Manager,
Tennessee Lumber, Millwork and Supply Dealers' Assn.

"Private Building Industry Indispensable"

Washington, D. C.

To the Editor:

As an individual, and not speaking for the National Housing Agency, I am in accord with your broad proposition [November editorial] that the private building industry is an indispensable part of machinery needed to get the whole war housing program done on time.

I am furthermore in agreement that new or additional approaches which make it easier to get the whole war housing job done are entirely desirable.

LEON H. KEYSERLING,
General Counsel, National Housing Agency.

Powerful Backing Offered

Springfield, Illinois.

To the Editor:

"Better to Build Than to Billet," is an excellent editorial; and you may be sure that, representing this Association, I will do anything to back such a program.

J. D. MCCARTHY, Secretary,
Illinois Lumber & Material Dealers Assn. Inc.

(Continued to page 79)

ENGINEERED FOR THE JOB!

Delivered to the Job...
Ready for Erection...

RILCO

FACTORY FABRICATED
WOOD STRUCTURAL MEMBERS

Available Today
For Priority Construction

●Wherever clear spans, free of braces and posts, are required for the building of airplane hangars, factories, munition plants, storage and service buildings, drill halls, auditoriums, churches, recreation centers, you can get the job done better, faster and economically with Rilco laminated structural framing members.

These Rilco products include beam arches for spans up to 200 feet and over, bowstring trusses, ply beams for flat roof structures of one and two stories, boomerang and utility arches, arch rafters and structural framing members continuous from foundation to roof peak—and solid timber connector trusses.

Designed and engineered for specific job requirements, they meet the exacting specifications of U. S. Army, Navy and Building Code requirements.

Under rigid factory controls, Rilco takes modern structural glues

and scientifically kiln-dried, seasoned lumber, selected for strength, density and slope of grain, forms, shapes and permanently bonds them into any desired size and type of structural member.

Rilco wood structural members are factory fabricated in five modern plants, strategically located for prompt service and delivered to the job site, ready for fast erection.

So, wherever the location of your job, *North, South, East, or West*, whatever the type of structure, Rilco can supply the structural members

you need. Complete engineering data and design cooperation is available to your architect or engineer. Write today for information on Rilco Laminated Products.

Copyright 1942. R. L. P. Inc.

RILCO

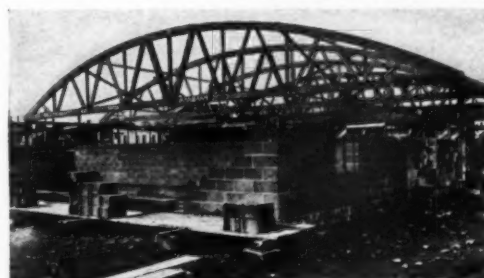
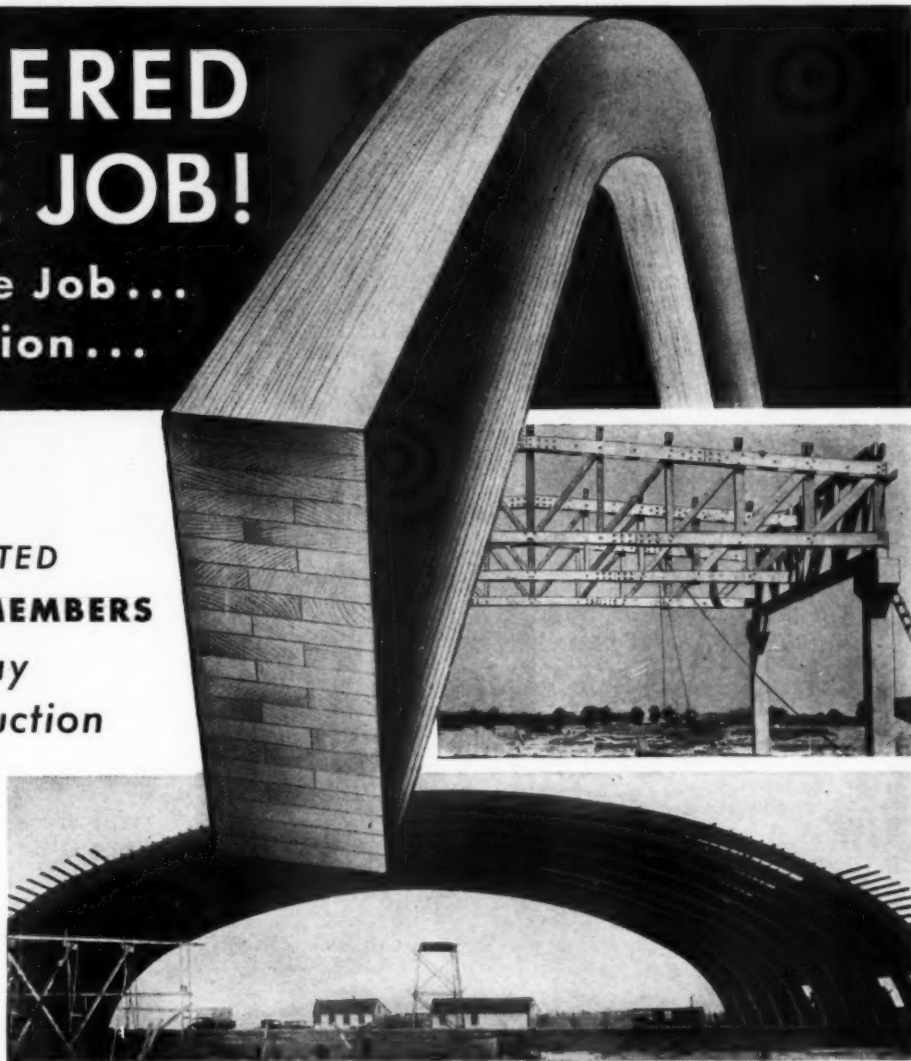
DESIGNERS
AND FABRICATORS OF
ENGINEERED WOOD
PRODUCTS FOR A WIDE
VARIETY OF USES

RILCO LAMINATED PRODUCTS, INC.

A Weyerhaeuser Institution

1564 FIRST NATIONAL BANK BUILDING, SAINT PAUL, MINNESOTA

Factories: ALBERT LEA, MINN., BRODHEAD, WIS., CHICAGO, ILL., HUNTINGTON, IND., WILKES BARRE, PA.



—For Your Guidance in 1943

**A Program
of ACTION
for Building Men
in 1943—**

—HOW TO MEET THE
PROBLEMS OF CHANG-
ING WAR CONDITIONS

—HOW TO PREPARE
FOR THE POST-WAR
BUILDING MARKET.

Beginning with the
JANUARY ISSUE OF AMERICAN BUILDER
"Building Tomorrow—Prospect and Preview"

**CURRENT
WAR HOUSING**

**MAINTENANCE
AND REPAIRS**

**COMMERCIAL
BUILDING**

**FARM
CONSTRUCTION**

PREFABRICATION

**POST-WAR
BUILDING**

**PRODUCT
DEVELOPMENT**

NEW DESIGNS

NEW METHODS

1. THE HOME BUILDING WAVE OF THE FUTURE

This article, by W. C. Bober, noted building economist, sizes up the outlook and opportunity for home building and shelter in all price classes after war restrictions are removed. Mr. Bober's article, "America's Housing Need" in the October, 1941, issue of American Builder did much to change and correct the thinking of the building industry.

2. WHAT KIND OF A HOUSE?

The best of the 1942 home designs, plans and construction developed immediately before war restrictions were ordered *plus* the further development in materials, equipment and design ideas brought during the war period are combined in this article to show you the kind of Victory homes America will build.

3. WHAT'S COOKIN'?

How science and wartime engineering developments will make the better homes of tomorrow. Developments in materials and methods. Looking ahead to the use of wartime research.

4. PREFABRICATION UP-TO-DATE

Covers production-line housing as well as prefabricated buildings for farm use, commercial and industrial purposes. This article includes a current survey of names, addresses, capacities and characteristics of products of house prefabricating firms now active.

5. FORECAST: BUMPER CROP OF FARM BUILDINGS

An eye opener which provides the facts. Improved financial condition of farmers plus the growing need for farm improvements indicate greater activity in the construction of every type of farm building and farm improvement.

6. COMMERCIAL BUILDING POISED FOR POST-WAR STARTING GUN

What can you expect of the post-war commercial building prospect. Stores, shops, and all civilian service buildings as well as countless other wartime casualties will have to be restyled and rebuilt. How will the style and quality of post-war construction compare with pre-war standards?

7. THE IMMEDIATE WAR HOUSING JOB

A penetrating survey of Administrator Blanford's program for the first half of 1943 for privately built war industry homes for rent and for sale, together with remodeling and conversion. The Government's program of shelter housing for war workers is also surveyed.

AMERICAN BUILDER

SPECIAL FEATURE ISSUES THROUGHOUT 1943

Will Carry Out American Builder's Program of Action

The January 1943 "Prospect and Preview" number outlined on the opposite page is the first in a series of feature issues *American Builder* will offer in its PROGRAM OF ACTION FOR BUILDING MEN IN 1943. Additional feature issues will be published throughout the coming year, each dealing specifically and in great detail with the subjects and problems of current and post-war importance. See below. For months not specified, *American Builder* will publish "Project Issues" which will feature field reports on current wartime building projects, to be selected.

February

THE IMMEDIATE WAR HOUSING JOB

Facts and figures to show how much of the war housing program has been accomplished, where the effort has fallen short, what remains to be done and how. Field report and typical builder operations. Illustrations of outstanding war housing operations and description of methods used. How old buildings are converted, remodeled. Analysis of Government plans for public building. How well Government Housing is providing accommodations for war workers.

March

PREFABRICATION UP-TO-DATE

Story of growth. Biographical sketches of every prefabricator in operation. Principal manufacturing and distribution systems of products of prefabricators. Includes the large centrally located plants, regional shop fabricators and on-the-site producers. Also presents the "how" of prefabrication. Latest production practice with emphasis on materials, power equipment and other labor-saving devices.

April

SPRING BUILDING NUMBER

Spring of 1943 building survey. Special feature, 101 ways to keep busy with wartime repair, remodeling and maintenance jobs. How Government plans to increase living space in arms centers by remodeling work. Features on re-roofing, re-siding, water-proofing and insulation.

May

LOOKING AHEAD TO THE POST-WAR QUALITY HOME

Debunking wild-eyed schemes and ideas concerning the post-war home. Survey of ways practical progress in

housing is most likely to develop after the war. How best in pre-war homes plus wartime developments will serve as starting points for post-war home-building practice. Interviews with prominent and successful home builders for their ideas on post-war housing. Large crop of photos and plans to illustrate what these builders believe to be their best pre-war designs. What improvements these builders expect to make in such designs when they resume building.

June

SERVICE AND COMMERCIAL BUILDING OF TOMORROW

A complete round-up of the post-war market for stores, shops, service stations, and service buildings. Course this type of construction will follow. Illustrations of well-designed pre-war structures of the various service and commercial types. Designs of the future.

August

FARM BUILDING — WHY, WHAT, WHEN?

Farm Buildings Number. Farm building under present wartime conditions. Why a boom in farm building improvements is expected. The later outlook for farm building as lumber and other critical materials become more available and restrictions are relaxed. Latest design and construction details for farm structures as recommended by farm authorities.

October

NEW PRODUCTS AND RESEARCH IN TOMORROW'S HOMES

In this issue *American Builder* will analyze and describe the effect of recent engineering and laboratory development on home products. How the products of the research laboratories will be given practical application in the building industry will be told. A pictorial presentation will be included showing the most interesting new materials, products and equipment.

CLIP AND RETURN THIS COUPON NOW

Free

... Fill in the coupon at the right—attach your remittance of \$2 for a one-year *American Builder* subscription or \$3 for two years—and mail. As soon as your subscription payment is received, a postpaid copy of our 180 page DEFENSE HOMES HANDBOOK will be mailed to you free of charge.

AMERICAN BUILDER, 30 Church Street, New York, New York

Enter my subscription for 1 year (\$2) ☐

2 years (\$3) ☐

Enclosed is \$..... in full payment.

New ☐

Renewal ☐

INCLUDE WITH MY SUBSCRIPTION, AT NO EXTRA COST,
A POSTPAID COPY OF DEFENSE HOMES HANDBOOK

Name

Street City

State Occupation

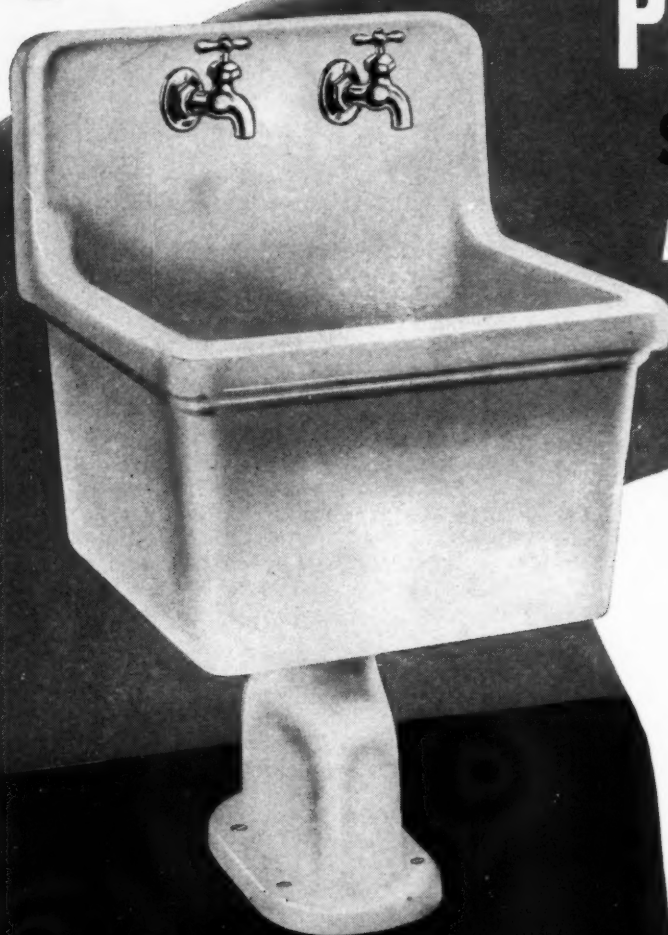
12-42

This offer good only in United States and Canada.

The World's Greatest Building Paper

30 Church St., New York

General Ceramics Perma-Gloss Slop Sink B510 for Army, Navy and Industrial use. Size 22" x 20". Weight 100 pounds crated.



PERMA-GLOSS

SLOP SINKS

Meet government specifications



Because of war restrictions on cast iron and pressed steel sanitary ware, General Ceramics has developed a new non-metal line called Perma-Gloss. It is made of carefully selected clays fired at a high temperature with a layer of vitreous china glaze. The process produces a homogeneous, durable, light, uniform body that will withstand thermal shock and will not craze or dunt. The surface is brilliant, lustrous and—what is more—is stain and acid proof through and through—not merely acid resistant. There's no paint or glaze to peel, no iron rust to stain clothing. The white glass-like surface cleans as easily as a china dish.

If required, vitreous "S" trap and strainer can be furnished. Plastic rim guards are available at a slight additional cost.

Specification reference index

Complies with Army Engineers' Specifications 8000E & PE623
— Also Federal Specifications WWP541a & E E-WWP541a

General Ceramic Plate Nos. Are From Illustrated Price Book G. C. 6

	FEDERAL SPECIFICATIONS E-WWP-541a	FEDERAL SPECIFICATIONS WWP-541a	WAR DEPT. SPECIFICATIONS PE-623 (8000E)	GENERAL CERAMIC PLATE NO.	Unit Prices
CLOSET BOWLS AND COMBINATIONS	XE 46	E 46		G 220-221	13.20
	XR 46	R 46		G 235-237	10.95
	XR 31L			G 215	17.25
	XR 31L	R 31L		G 216	17.25
	XR 31L			G 217	18.75
	XR 31	R 31	P 1	G 245	6.50
			P 1	G 247	6.50
	X 31L	R 31L		G 275	10.75
URINALS		E 43B		G 265	18.05
		E 40		G 213	23.25
		R 40		G 211	20.30
	XV 12W		P 2	G 360	10.05
LAVATORIES		V 18		G 330	45.00
		V 14		G 340	27.85
		V 18W		G 353	35.00
	XVB 20		P 14	G 120	10.95
	XVB 20	VB 20	P 14	G 115	11.25
		VB 20L		G 115	14.80
		V 20L		G 110	20.80
		V 24L		G 110	14.70
SINKS		VB S22		G 132	19.20
	XG 20		P 12B	B 551	15.50
	XG 24			20x18	5.65
	XV 22	V 22	P 5	24x18	6.60
	XV 22		P 5	20x18	12.65
TRAYS			P 7	24x20	23.90
				22x20	35.90
				30x22	23.90
	XT 20			B 568	31.50
				20x18	8.00

GENERAL CERAMICS COMPANY
SANITARY WARE DIVISION
METUCHEN, NEW JERSEY



Washington News Summary

WPB Lifts Ban on Orders P-55 and P-110 But Restrictions on Builders Tighten

While the building industry thankfully watched WPB raise the ban on issuance of preference orders P-55 (privately financed war housing projects), and P-110 (remodeling of housing in defense areas), it viewed askance the litter of legal props that occupied the center of the stage.

The problem was, how to ad-lib until the script was rewritten to conform to such things as the War Housing Construction Standards, which radically changed the type of housing to be built in war areas; the regulation MPR 251, which licensed all elements of the industry engaged in construction and established fixed methods of computing prices; and Order L-192, which placed construction machinery and equipment under allocations control.

Took 15,000 Tons of Steel to Lift Ban

Fifteen thousand tons of ingot steel, which translates into something like 10,500 tons of usable steel products, was allotted Nov. 7 to public and private building. It was primarily steel, the new common denominator of production, that had made the ban on building necessary. But with the new allotment of 15,000 tons added to the 4,800 tons remaining from previous allotments it will be possible to build something under 25,000 dwelling units.

To insure this, government agencies have been computing the amount of copper, zinc, tin, brass, lead, rubber and lumber needed to go with the steel to be used in war housing. How much of this material will eventually find its way into private building projects is a question. For, due to the scarcity of materials only housing units recommended by the NHA will receive consideration from WPB; and an effort will be made to increase the amount of new housing for rental.

Without doubt, only absolutely essential housing projects will receive any critical materials and many billions of dollars worth of dams, highways, utility plants and other contemplated construction will be lopped off the budget. But the main point was won: WPB field offices are again processing P-55 and P-110 preference ratings.

New Standards of Construction

Of importance in gaining favorable attention for new war housing projects will be the builder's ability to meet the new War Housing Construction Standards, effective October 28. All projects must comply with the standards of design and materials con-

sumption permitted, (See page 49 for details). Which simply means that most projects in planning stage and many now up for approval will have to be redesigned, in some cases refinanced, and under some circumstances abandoned. Both prefabricated and site constructed houses are covered by the directive.

One of the main effects of the new standards will be to force the substitution of many products for lumber. Opportunities for cement, masonry products and wall-boards are afforded. Use of wood wall sheathing is prohibited when such materials as fibre, insulation and gypsum board are obtainable. Softwood for flooring or sub-flooring is prohibited. Single family detached units can be built only where there is a definite and immediate need for that type of housing and then only when the essential utilities are contiguous to the lot (except where other types of dwelling units would require the use of a greater amount of critical material). This ruling should give builders who can operate on scattered lots a real opportunity.

All types of construction must be located so far as possible on sites adjacent to existing utility lines. All structures shall be laid-up masonry, such as walls or floors or brick, clay tile, cement, concrete block, or other lumber substitute exterior wall construction (except in areas where masonry materials or labor are not obtainable). Any construction method permitted by the War Housing Critical List can be used provided the total softwood lumber used does not exceed the maximum allowed by the directive. The lowest grade of lumber that will serve the purpose and the species available must be specified.

Industry Licensing And Price Control

Equally important to the building industry is the pricing-licensing OPA regulation MPR 251 which became effective Nov. 5. Providing pricing regulations in three categories: (1) sales of all types NOT in excess of \$500; (2) sales in excess of \$500 on a cost-plus basis, and (3) sales in excess of \$500 on a lump-sum basis. The order implements the regulations by automatically licensing all contractors, builders, installers and erectors supplying construction, maintenance services, or making sales on an installed or erected basis. (See page 45 for details.)

The order covers services where labor only is required (except services rendered an employer by an employee), and includes such jobs as household repair and service

by plumbers, paperhangers, carpenters and electricians. The regulation covers work done by the job, but does not apply to the wages of persons performing jobs. For example: a roofing contract that named a price for the entire job is covered, but if the householder bought roofing material and employed a roofer to lay it neither the householder nor the roofer would be subject to the regulation. Ceiling prices established are generally equivalent to those in effect during March 1942, but adjusted for increases in labor costs between March 31 and July 1, 1942, the date on which the construction industry stabilization agreement became effective.

Enforcement is provided for through license suspension proceedings, suits for treble damages, civil enforcement actions, and criminal penalties. Contracts for \$500 or less need not be reported to the Office of Price Administration, but contracts for over \$500 must be reported; cost-plus contracts must be reported once within 10 days of entering into the contract; and lump-sum contracts must be reported twice, once within 10 days of entering into the contract and again at least 10 days before the anticipated final settlement.

Allocations Control of Construction Machinery

Effective November 15, all construction machinery and equipment was placed under allocations control with the issuance of Allocation Order L-192. Three schedules, A, B, and C are attached to the order and indicate the type of control that will be exercised over various kinds of equipment. (See page 64 for details.)

Equipment of types listed in Schedule A, such as tractor motor power cranes; core drillers; pile hammers; agitator concrete truck type mixers; must be registered when in the hands of private owners. Registration is made on Form WPB 1159 and sent to the Used Construction Regional Specialist at the War Production Board regional office in the region in which such equipment is located. Purpose of registration is to enable prospective buyers or other users to negotiate for and obtain equipment which has been released or which has become idle.

Schedule B contains a list of smaller units of equipment such as jack hammers, rock drills, etc., which need not be registered and which are not subject to the order's restrictions in two important respects; namely, the procedure for placing and receiving orders, and the restrictions on resale, rental and use.

Restricted machinery listed in Schedule C of the order will be manufactured only for the military.

Civilian purchase and use of new construction equipment on Schedule A for private account will be permitted after

IN A FEW WORDS:

1. Discriminatory WPB directive halting processing of P-55's and P-110's (Oct. 29), rescinded (Nov. 7), when steel shortage was temporarily relieved by allotment of 15,000 ingot tons. Immediate housing picture: about 25,000 units.

2. Rigid War Housing Construction Standards (Oct. 28) eliminates typical type construction; forces substitutions for lumber and re-consideration of plans. Brick, concrete, wallboards of all types get a break.

3. Sharp-toothed OPA regu-

lation MPR-251 (Nov. 5) provides pricing methods for all sales on an installed or erected basis; licenses all elements of the industry engaged in construction. Added to March 1942 ceiling prices are adjustments for increased labor costs.

4. Restrictive WPB Order L-192 (Nov. 7), places all construction machinery and equipment under allocations control; stops production of certain types for civilian use; leaves L-196 in force, but supersedes Orders L-82 and L-82-a. Registration of some equipment required.

November 15 only under an authorization from the Director General for Operations.

Restrictions previously imposed under L-196 requiring registration of used construction equipment and reports of change of status are retained unchanged.

The Order L-192 supersedes Limitation Orders L-82 and L-82A.

Factory output of construction machinery and equipment will be controlled by direct allocation of finished units to authorized users. Items which appear in both Schedule A and C may not be ordered, sold, or delivered for civilian use, nor will an authorization be approved.

Repair and Maintenance Assigned AA-1 Ratings

To assure that the nation's essential industries will be kept in operation the top priority rating AA-1 can be applied to essential repair and maintenance (Nov. 11). Included in this directive, which becomes a basic policy for the first quarter of 1943, are essential repairs and maintenance for productive facilities, utilities, housing and consumers' durable goods. Until the Controlled Materials Plan goes into full operation the priorities system will be used to obtain steel, copper and aluminum. Under CMP each agency will break down material requirements three ways: that needed for production; construction and facilities; maintenance and repair.

One Delivery a Day From One Source

A recent ruling from ODT states that a customer who receives one delivery from a business establishment cannot send his own truck to that establishment to pick up additional material during the same calendar day. The order reads "... no

person shall cause to be made by motor truck ... more than one delivery from any point of origin to any one point of destination during any calendar day."

WPB Surveys Millwork Industry

To determine the proportion of existing capacity being used for direct war requirements and to ascertain whether available plant facilities can be used more effectually by concentrating war orders in strategically located areas, a survey of the millwork industry is being made by WPB. Unequal distribution of millwork orders has become one of the bottlenecks and to avoid delays in filling orders and shutdowns in some cases, a program of concentration is in the making. Partially to smooth out the distribution of orders which has led to delays, and partly because of the shortage of lumber, the survey is being undertaken. The time is coming, states Arthur Upson, Chief of the Lumber Branch, when there will be only two classes of orders: those for direct war use; and those for essential civilian requirements.

Douglas Fir Under New Limitation

Douglas Fir lumber, effective October 29, came under the provisions of Order L-218 and is removed from the restrictions of M-208. Sales, shipments, and deliveries by producers within the scope of L-218 can be made only to the Central Procuring Agency for the armed services, and their agents, and through the WPB, Lumber and Lumber Products Branch at the direction of the Director General of Operations.

Lumber now in the hands of distributors and retail yards will still be governed by M-208. Douglas Fir in transit on October

29 can be delivered to its destination. Rigid though this order is, specific authorization is made whereby Douglas Fir lumber can be released to dealers through the use of Form PD-423.

Two Amendments To Order M-208

Amendment No. 3, issued Oct. 20, tightens restrictions on use of the higher stress grades of softwood lumber by raising the minimum rating required for Class 2 orders from AA-5 to AA-4.

The grades of lumber which may be used to fill Class 1 orders require preference ratings of AA-2 or higher. The effect of Amendment 3 is to limit the grades of lumber used to fill Class 2 orders to preference ratings of AA-4 or higher. At the same time, the top rating for Class 3 orders becomes AA-5 instead of A-1-a. Definition of Class 4 orders is unchanged.

Amendment No. 4, also announced Oct. 20, defines a softwood lumber "producer" as "any plant which processes, by sawing, edging, planing or other comparable method, 25 per cent or more of the total volume of logs and lumber purchased or received by it, and which sells as lumber the product of such processing."

Can't Break Rent Ceilings With Clauses

New and unusual clauses designed to break federal rent ceilings are creeping into leases throughout the country, Paul A. Porter, Deputy Administrator in charge of the OPA Rent Division, stated on Nov. 1. He pointed out that no new clause in any type of lease can be enforced today if such a clause was not a part of the lease arrangement on the maximum rent date. Also, no tenant can agree to waive the benefit of OPA's eviction controls, even if such a clause was in the lease on the maximum rent date.

Lumber Ordered On An Appeal Form

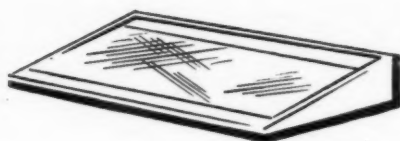
Lumber to be used for the war industries, war housing, mining, farmers and ranchers, can be applied for on a new form, PD-1X, which, if properly executed and accompanied by an impressive statement of the needs in the local community, may cause WPB to grant the dealer who makes the application a priority to receive specific amounts of lumber.

Amendment No. 1 to M-208, forbidding the extension of ratings for the replacement of inventory for Class 3 and 4 orders, is still in full force and effect. PD-1X should be regarded as a temporary appeals procedure to take care of emergencies. Dealers should not request items of Douglas fir lumber on PD-1X forms.

Dealers should execute three copies of PD-1X, retaining the third one and sending the others to the Distributor's Branch, War Production Board, Temporary Building "E", Washington, D. C. If the application is approved, one copy of PD-1X will be returned to the applicant showing the quantity of materials authorized and the rating which may be applied.

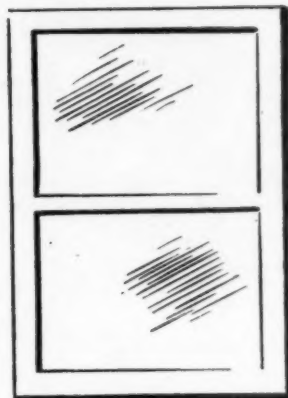
3 PRACTICAL WAYS TO KEEP HOMES WARMER THIS WINTER

WITH GLASS

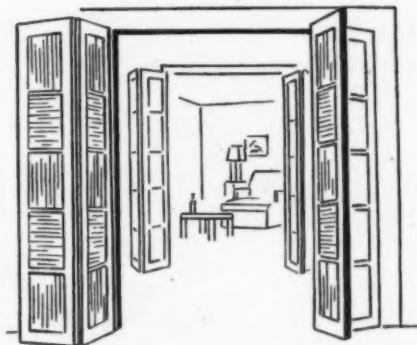


Window Well Covers.

Here's a practical and simple glass idea for protecting the homes with basement window wells from cold air and drafts. Build a slanting wood cover that fits over the wells . . . glaze the top with Polished Wire Glass. Light comes in, cold air stays out.



Storm Sash. Every home should be protected with storm sash. It's a means of saving up to 30 per cent of fuel and heat. It makes possible, uniform, healthful heat, makes the home quieter, and protects against fires resulting from overheated furnaces.



Hallway Doors. Homes don't have to worry with cold, drafty halls and large, difficult-to-decorate arches, when they can be corrected so practically and economically by closing them off with Decorative Glass Doors that reduce drafts and save heat.

Government figures reveal that the average home uses almost twice as much fuel as is needed to keep it warm and comfortable during the winter.

There's only one way to stop this waste . . . *plug the leaks that drain the heat.*

Through installation of Window Conditioning these leaks can be substantially plugged. Fuel is saved. Money is saved.

Health is protected. And the value of the home is enhanced.

From the complete line of Libbey-Owens-Ford glass products you can select the right kind of glass for many features that add to home comfort and convenience. High quality assures user satisfaction. Libbey-Owens-Ford Glass Company, 1208-A Nicholas Building, Toledo, Ohio.



LIBBEY • OWENS • FORD

QUALITY *Flat Glass* PRODUCTS

**WAR BOND PAYROLL SAVINGS
ROLL OF HONOR**

Please With One Member of Your Employees Whose Workers Are Investing at Least 10 Percent of the Gross Payroll in War Savings Bonds Through the Payroll Savings Plan

The eyes of all America are upon the United States Treasury Roll of Honor appearing in the "Payroll Savings News." For copy write War Savings Staff, Treasury Department, Washington, D. C.

**NEW 10% WAR BOND DRIVES
SWELL TREASURY HONOR ROLL**

HOW TO "TOP THAT 10% BY NEW YEAR'S"

Out of the 13 labor-management conferences sponsored by the National Committee for Payroll Savings and conducted by the Treasury Department throughout the Nation has come this formula for reaching the 10% of gross payroll War Bond objective:

1. **Decide to get 10%.**
It has been the Treasury experience wherever management and labor have gotten together and decided the job could be done, the job was done.
2. **Get a committee of labor and management to work out details for solicitation.**
 - a. They, in turn, will appoint captain-leaders or chairmen who will be responsible for actual solicitation of no more than 10 workers.
 - b. A card should be prepared for each and every worker with his name on it.
 - c. An estimate should be made of the possible amount each worker can set aside so that an "over-all" of 10% is achieved. Some may not be able to set aside 10%, others can save more.
3. **Set aside a date to start the drive.**
4. **There should be little or no time between the announcement of the drive and the drive itself.**
The drive should last not over 1 week.
5. The opening of the drive may be through a talk, a rally, or just a plain announcement in each department.
6. Schedule competition between departments; show progress charts daily.
7. Set as a goal the Treasury flag with a "T."

As of today, more than 20,000 firms of all sizes have reached the "Honor Roll" goal of at least 10% of the gross payroll in War Bonds. This is a glorious testimony to the voluntary American way of facing emergencies.

But there is still more to be done. By January 1st, 1943, the Treasury hopes to raise participation from the present total of around 20,000,000 employees investing an average of 8% of earnings to over 30,000,000 investing an average of at least 10% of earnings in War Bonds.

You are urged to set your own sights accordingly and to do all in your power to start the new year on the Roll of Honor, to give War Bonds for bonuses, and to purchase up to the limit, both personally and as a company, of Series F and G Bonds. (Remember that the new limitation of purchases of F and G Bonds in any one calendar year has been increased from \$50,000 to \$100,000.)

TIME IS SHORT. Our country is counting on you to—

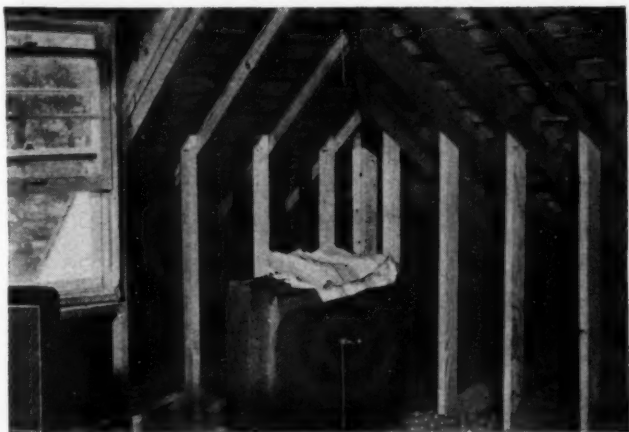
"TOP THAT 10% BY NEW YEAR'S"



Save with

War Savings Bonds

This space is a Contribution to America's All-Out War Effort by AMERICAN BUILDER.



The corner of the attic in the home of Don McNeil, popular master of ceremonies of the "Breakfast Club."

The same attic in Mr. McNeil's home, after applying Insulite to the studing—an attractive, serviceable room.



Note how Insulite has completely modernized the interior of this factory. Note how bright, airy and workable it is—thus helping to increase efficiency.



Here's the way to **NEW BUSINESS**

IN DEFENSE AREAS: Attics are being converted into living quarters to take care of the housing shortage for defense workers—rooms left unfinished in original building plans are being completed.

FOR FUEL SAVING: Rooms finished with Insulite will effect substantial fuel savings because Insulite insulates as it builds.

WARTIME REPAIRS & MAINTENANCE: Many manufacturing and industrial plants are being remodeled to increase their productivity. Insulite used on walls and ceilings provides interior finish, acoustical control, high light reflection. There is no more ideal material for partitions and temporary quarters.

THE ANSWER TO SPEED IN CONSTRUCTION: Insulite fits into today's demand for speed and time saving—the large panels are easy to handle—easy to apply—go up quickly. This time saving and quick application is highly important when labor is scarce.

Interior walls and ceilings finished with Insulite require no plastering, papering or painting. A big saving in expense and time. Look about you—there's still business for you and Insulite!

Look for the Insulite Red Package

INSULATE WITH
INSULITE
THE ORIGINAL WOOD FIBRE STRUCTURAL
INSULATING BOARD

INSULITE
Minneapolis,
Minnesota



Division of
Minnesota and Ontario
Paper Company

REG. TRADEMARK

RISING TIDE

THROUGH '42 INTO '43

Again and again, on more and more housing projects, the advantages of full wall construction with giant Strong-Bilt panels by Upson is winning cost-conscious builders in a steadily-advancing tide

For these reasons: Upson Strong-Bilt Panels offer the means of doing *three important jobs at the same time*—(1) applying durable interior wall linings (2) providing efficient insulation (3) completely finishing wall and ceiling surfaces. All in one operation—with the same material.

Thick, strong, rigid, durable and *crackproof*, these vastly improved panels permit a wider application of the new mass production speed systems, whether based on pre-fabrication or site fabrication.

They *reduce construction time*, thus bringing about *substantial savings in cost* while assuring *crackproof* construction with a surface of surpassing beauty and charm.

If you are planning war housing, remodeling for the war program, or designing for the postwar market, let us show you how to use Strong-Bilt Panels for greater efficiency, speed and economy. The Upson Company, Lockport, New York.

► **FULL WALL CONSTRUCTION:** Special giant panels 8' wide, long enough to cover entire wall of average room without seams or joints. Also available in regular 4' widths.

► **DRY-BUILT METHOD:** No water. No moisture. No "drying-out" period. Apply any month of year, in any climate.

► **APPLICATION TIME:** 40 to 50 man-hours for average family unit. Panels driven against pronged Floating Fasteners nailed to studs. No taping—no cutting—no filling of joints. No nails to countersink. No filled holes to mar surface.

► **INSULATION VALUE:** Up to 3½ times that of plaster. High resistance to sound.

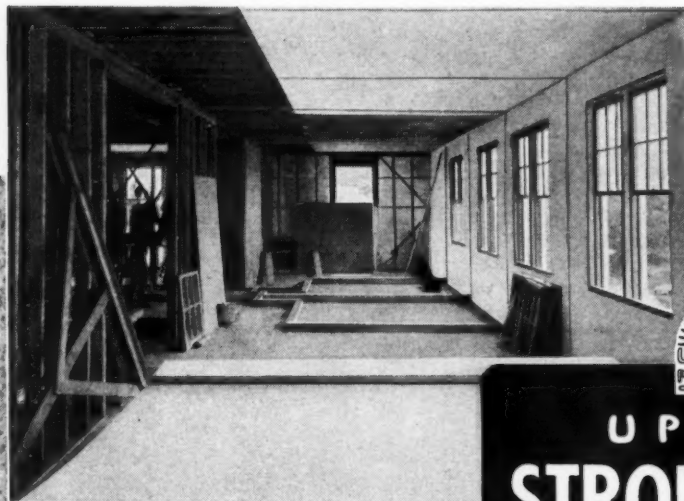
► **STRONG AND RIGID:** Stands impact test six times boards with a mineral core.

► **FINISHING:** Beautifully pebbled surface, pre-finished and pre-sized at factory. Painting begins immediately after application of trim. Single coat usually is sufficient—never more than two.

► **FHA ACCEPTED:** Liberal terms streamlined for the duration.

► **PRE-FABRICATION:** For projects of 100 units or more, sizes are pre-cut and numbered at the factory—ready for lifting into place at the site or pre-fabricating plant. Skilled supervisors can be supplied.

Upson Quality Products Are Easily Identified By The Famous Blue-Center



UPSON
STRONG-BILT
PANELS

THE BEAUTY SURFACE FOR WALLS AND CEILINGS

Message to Washington

AN EDITORIAL

THIS nation's war housing problems can be solved without billeting, barracking or ruthless commandeering of private property.

They can be solved by unleashing the force of private initiative and enterprise — by tearing away the bureaucratic shackles that now bind the giant productive capacity of this industry.

Make no mistake: Private enterprise is through unless a more intelligent and workable policy is adopted in 1943 than was pursued in 1942. This, in the face of the most serious housing situation this country has ever faced.

MAZE OF CONFLICTING RULES

From a total of 496,700 dwelling units in the first nine months of 1941, the production of private builders fell to 259,800 for the same period in 1942. Most of these were started in the early months, before the War Production Board and housing officials began changing rules so often and so fast that builders could no longer function.

While war workers were desperately crying for homes, builders were frantically fighting their way through a maze of stop orders, priority rulings, and conflicting regulations. Even though materials were available and on hand, they were unable to build the houses so badly needed. Frequently, they were even unable to finish houses in advanced stages of construction.

Material shortages cannot be wholly blamed for the decline. There are still great unused stores of building products that can be tapped, and under the proper administrative procedure, private builders will act as the bird dogs to find them and put them to needed war use.

Builders are energetic, resourceful, ingenious men. They have devised numerous ways to build with less and less of critical materials. They will devise more ways if given a chance. But they cannot

function under a system in which arbitrary changes in building procedures are made suddenly in the middle of a complex operation extending over a period of months. A home building project cannot be stopped, started and altered at will in mid-course.

Bear in mind that the building of houses is a local industry in each of hundreds of war-swollen communities. The work is done by many thousands of relatively small firms operating on tens of thousands of scattered sites. To regulate this industry without killing the initiative and enterprise of these thousands of small firms requires intimate knowledge of its men, distribution methods and complex operating practices. That knowledge has been lacking, or has not been wisely applied.

It is our suggestion that the scope of the Federal Housing Administration — which of all the government agencies seems to have the most practical knowledge of the industry — should be enlarged and additional men put in its field offices to assist, encourage and expedite private home building. On the following page, *American Builder* presents seven additional steps to permit private builders to function in 1943.

WILL GET JOB DONE

The men of this building industry want to build. They feel it is their patriotic duty to build. They will make enormous sacrifices of time, energy, effort and of money in order to build.

All they need is intelligent leadership and administrative judgment by officials whose duty it is to get wartime housing built.

Give them this leadership, and they will provide housing with the same speed, energy and volume that have been achieved in the production of planes, tanks and the weapons of war.

Joseph B. Mason
Editor

DWELLING UNITS STARTED IN U.S. 1ST 9 MONTHS, 1941-1942*

1941	PRIVATE 496,700	AVERAGE UNIT COST \$3,545†
	PUBLIC 82,900	
1942	PRIVATE 259,800	AVERAGE UNIT COST \$3,170.†
	PUBLIC 133,900	

American Builder Chart

*Source-Bureau of Labor Statistics
†Permit Valuation

PRIVATE home building dropped 48 per cent from 1941, but was still double the volume of public construction.

WHAT 1942 CA

By Hugh Potter

Chairman, Home Builders' Emergency Committee

PRIVATE home builders deem it their pressing and all-important duty to produce war housing quickly, efficiently and with a minimum use of critical materials. There can be no question about the need. The cause is a disturbing, multiplying and highly dangerous population pressure in war industry centers.

In the private home building industry we have many thousands of experienced, energetic, ingenious, tenacious men who in 1941 produced more than 619,000 houses. In 1942, however, according to our best estimates they have produced less than 300,000 units. In 1943 they will produce an insignificant quantity of housing—unless a change in policy of government housing officials and the WPB is made.

The private building industry *could* have produced double the number of homes it did this year. But under the conditions that prevailed—conditions approaching at times the utmost confusion and chaos—it is miraculous that 300,000 units have actually been produced.

In contrast, public housing agencies, even with the enormous concentration of effort and power of government finance behind them, were able to produce less than 150,000 units in 1942.

It is not our purpose to criticize. Where public agencies can produce quickly and efficiently dormitories and temporary structures, they should be employed.

But the facts of housing speak for themselves, and it has become obvious even to the uninitiated that public housing agencies are for the most part unable to produce housing of the right kind, at the right place, and at the right time, *as well as can the private operators*.

One basic reason for this is that the need for housing is scattered over hundreds, yes, thousands of sites in local

communities throughout the United States. In all of these communities there exist experienced, qualified private building firms with organizations able immediately to produce any kind of housing that proper study shows is needed or desirable for the war effort. These men know local conditions, local labor and material supplies, and local techniques necessary to get quick and efficient results.

Why, then, did not private builders produce more war housing in 1942? (Remember that the 300,000 units they did produce were double the number that were produced by public agencies.) Because there has been confusion, change, delay, misunderstanding, red tape, and material shortages that have at times seemed to completely throttle any further activity by the private builder. Yet these men, because they are born fighters, have come back time and again to overcome obstacles and proceeded with their jobs.

Government Agencies Must Stop Stream of Orders Followed by Counter-Orders

The building of a hundred homes or five hundred homes is not an operation that can be turned on and off like a spigot. Yet many of the orders and directives of our government agencies seem to act on that assumption.

While the crying need for housing in war centers has increased day by day, the productive capacity of private builders most capable of meeting this need has been slowly but surely throttled. This, gentlemen, is not in the public interest nor will it help win the war. Steps must be taken to unleash the *force and drive of private initiative* in housing as it has been done in shipbuilding, tank production and the implements of war. For housing in many areas ranks equally with implements of war in importance today.

What we must do is find out how to make the housing program work, and therefore in this report I am suggesting seven simple steps that would enable private builders to do the job that is needed in 1943:

1. Allocate enough materials for the minimum number of needed housing units, and then stick to the program and see that private builders are given sufficient priority assistance to get the materials.

2. Simplify procedures so that building jobs are not

PUBLIC AND PRIVATE HOUSING SINCE 1936*

	Privately financed	Publicly financed	Total
1936	304,230	14,770	319,000
1937	332,401	3,599	336,000
1938	412,706	6,706	406,000
1939	458,458	56,542	515,000
1940	529,571	73,029	602,600
1941	619,460	95,740	715,200

*Source—Bureau of Labor Statistics.

42 CAN TEACH 1943

Housing record of confusion, delay, misunderstanding and red tape can be changed by proper administrative steps

delayed by unnecessary transfer of papers between FHA, NHA and WPB regional offices.

3. Increase the mortgage amounts available to private builders for war housing to cover increases in building costs.

4. Consult with experienced, qualified builders represented by their national organization before taking drastic steps that may confuse or disrupt a program already under way.

5. Increase the supply of lumber by appropriate steps which may include in certain cases the raising of ceiling prices.

6. Expand the field staff of the Federal Housing Administration so that more men may be assigned to processing war housing jobs and speeding up the operations of private builders.

7. Avoid "changing rules in the middle of the game," remembering that even the most efficiently planned and operated building project requires at least six months from the early planning stages when materials are ordered and commitments made, to the final completion.

These are the major steps that would permit the private builders of the nation to function in 1943, as we believe they should function to prevent a serious crisis in housing. At all times let us bear in mind that in America as it is today, American citizens and workers cannot be forced to live in ugly, substandard, ill-equipped quarters. War workers have already demonstrated their dislike of dormitories and of some public housing which they felt was below a decent American standard. Let us not destroy morale by setting the standard too low.

All that we ask as private builders is that we be given a chance to exercise our ingenuity, inventiveness, and productive efficiency. We can build houses with a minimum use of critical materials. We have already reduced the use of materials to such a point—so that the overall requirements are a negligible quantity in the national picture compared with the importance of the housing produced.

Our crying need comes under the heading of *efficient administration*—a definite, dynamic, consistent administration of the housing program from the top of WPB on down through the housing agencies to the practical operating builders in the field. We believe it is possible for a simple and efficient system to be made to work. We will co-operate in every way possible to make it work in 1943.



HUGH POTTER

Facts About War Housing

Since July 1, 1940, private builders completed 825,000 dwellings in war production areas. The total cost was \$3,750,000,000, or an average per unit of \$4,540.

During the same period, public housing agencies completed only 116,169 family dwelling units, despite tremendous pressure backed by financial resources of the U. S. Government.

This record of 7 to 1 for private builders was made in the face of a growing accumulation of difficulties, the latest of which was the withdrawal of priority assistance to private builders Oct. 29. Public housing agencies continued with AA-3 and AA-4 ratings.

Surveys show considerable stocks of building materials still available. Under proper procedure, private builders can act as "bird dogs" to uncover and put such materials to use in needed housing. In Cook County, Illinois, the Chicago Home Builders Association and the FHA co-operated in a survey which uncovered more than enough materials for 3,000 houses; stocks of 8,500 bathtubs, and metal lath for 10,000 were found.



CHARMING FHA Title VI homes built by T. V. Albert at Cranford, N.J.; cost, \$4,000 a unit.

ONLY a few blocks apart in Cranford, N.J., are two housing projects which strikingly illustrate some of the differences in public and private building.

The privately built project is a Title VI FHA job of charming, compact apartment homes which, when built, embodied the latest recommendations of WPB for savings of critical materials.

The public job is a barrack-like expanse of structures put up by Federal Works Agency to which local citizens have applied the term, "chicken coop architecture."

Builder of the Title VI job is T. V. Albert, who has been constructing good houses in Cranford for many years. Most of his men have been working for him more than ten years, and a number fourteen years. The building above is one of 16 in a project just completed, and Albert is about to start eighty more units.

Albert completed the above unit in less than two months' time at a cost of only \$4,000 per unit. It was quickly occupied by war workers from nearby plants who are very enthusiastic about its homelike setting, well lighted rooms, excellent plan.

Residents of Cranford cannot help but contrast this

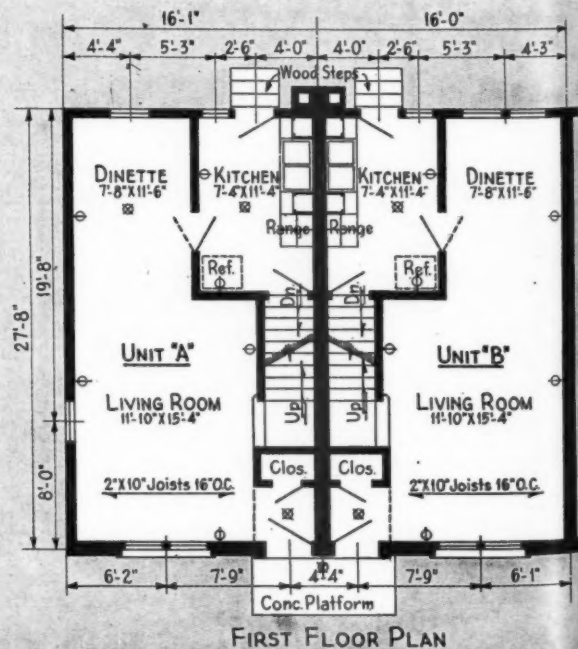
privately built job with Winfield Park, a 700-unit Federal Works Agency project paid for by Uncle Sam. Contract was awarded in May 1941, and a year and a half later the job was still only half occupied. As of Sept. 18, when picture opposite was taken, \$3,188,700 had been spent.

Deducting sums spent for a school which was also built, it appears that the unit cost will equal or exceed that of the privately built Albert job pictured above. It is, of course, a direct expense to the U. S. Government, whereas Albert's job and all those of private builders are built without cost to the Government. Even the mutual mortgage insurance fund set up by FHA is paid for by the owners of FHA houses, who contribute every month to this fund.

Not only is the Winfield Park public housing job unpopular locally because of its looks and the nature of the project, but there have been numerous delays, difficulties and inefficiencies in construction. Large extra sums have had to be allotted to the job for repairing leaky roofs, waterproofing basements and improving the drainage system. Local citizens have been impressed by the fact that although there are three government agencies with



BUILDER Albert and his crew. At right: plans of Albert's Title VI attached house job showing back-to-back arrangement of plumbing units for economy. McMurray & Schmidlin were the architects.



QUICKER-CHEAPER

"Chicken Coop Architecture" Not Popular



PUBLIC housing project, Winfield, N. J.

three different offices on the project, the job seems to have gotten into endless difficulties.

As late as Sept. 18, workmen were still engaged in repairing roofs and in waterproofing operations.

While these two housing projects are only a few blocks apart in New Jersey, they are miles apart in the philosophy behind them. The 700-unit public job is a result of the public housing advocates' enthusiasm for huge mass construction projects. The resulting projects upset and disrupt local communities, and are frequently violently opposed by the local citizens. In the New Jersey area around Cranford, there are plenty of builders like T. V. Albert who can build projects of 10 to 100 homes—or more if necessary—better, quicker and cheaper than any public operation run from Washington. They have demonstrated that they can do it in such a way that the housing blends into the community, and they have demonstrated that they are even more adaptable and ingenious in saving critical materials than the public housing jobs.

In every war swollen community, where the demand for housing is so acute, there are large numbers of efficient, experienced private builders who can get the job

Winfield Park Half Empty After Being Open for Year

Despite Housing Shortage, Workers Shy Away from Costly Federal Project

Staff Correspondent.

WINFIELD TOWNSHIP—Working against time as Winter approaches, a swarm of men is busy repairing roofs and waterproofing 254 buildings comprising the 700-unit war workers' housing project known as Winfield Park. Meanwhile investigation is being made by federal agents to determine why, almost a year after being "opened" for tenants, this public housing project today is less than 50 per cent occupied.

Winfield Park was constructed under auspices of the Federal Works Agency. When all federal housing projects were transferred to the National Housing Authority in early Summer, management and maintenance of the 36-acre homes layout off Centennial avenue, Cranford, and Stiles street, Linden, became the responsibility of the Federal Public Housing Authority, unit

tenants." He said 55 families had left the development and a score of others had indicated their intentions to move.

"Many of the tenants who have left," commented Cantillo, "have moved away because they have been able to find living accommodations nearer the places they work. Some have purchased houses. Most of the people who have come here have stayed on and not a few have indicated their intention of staying permanently."

Currently, road builders are on the last lap of completing the roadways winding between the regularly placed houses of one and two story construction. Facilities for water and electricity supply and installed and drainage conditions are being improved with a view to having tenants occupy the remaining homes by the end of the year.

Additional \$400,000

To complete installation of improvements, repair structures where needed, and to construct a school house and a community center, the \$2,500,000 project recently was given an additional government grant of \$440,000. The FWA has awarded a contract for the building of the school, which will take \$140,000 of it.

Batch of Trouble

Inheriting the management, FPWA also inherited a batch of trouble. For, since the moment they had begun to occupy houses last November, tenants had been registering complaints about conditions.

LOCAL newspapers and local citizens are critical of public housing job and inefficiency.

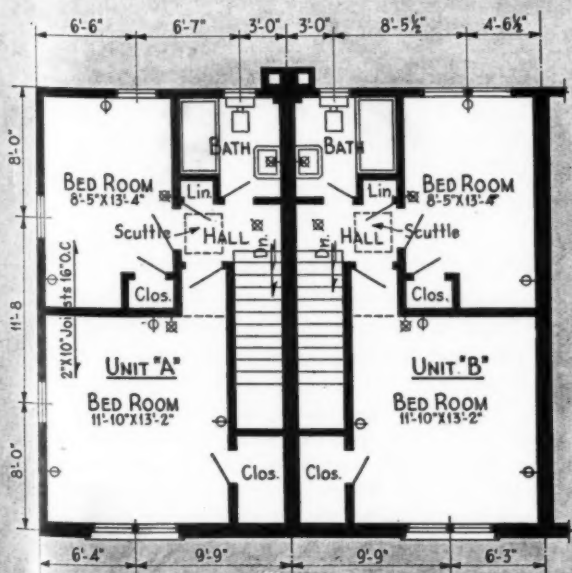
done if only they are given a chance to prove it.

The record of recent years shows that it is far more sensible and efficient to decentralize housing, and as far as is humanly possible, have it done by local private builders working through local firms familiar with local problems and material supplies.

The record speaks for itself. Since July 1, 1940, Congress has appropriated \$1,334,300,000 for public war housing. Yet, as of Oct. 20 of this year, when a report was issued by the National Housing Agency, only 116,000 family dwelling units had been completed.

At present, some 86,000 units are under construction,

(Continued to page 84)



SECOND FLOOR PLAN



FRITZ BURNS, whose record shows private builders best fitted to provide our much needed war housing.

We're the SUICIDE T

"Not asking for subsidies—nor parities—nor cost plus contracts with guaranteed profits—but the opportunity to build the greatest amount of decent war housing with least materials—and with the minimum of government ownership and post-war repercussions."

The case for private building of war housing dynamically stated by the builder of over 2000 since 1940.

By Fritz B. Burns

President, National Assn. of Home Builders

I BELIEVE I speak truthfully for the entire home building industry when I say that we have only one objective, and that is to build the housing accommodations that are necessary for the war effort.

The normal objectives of business are subordinated with us, as with all true Americans.

If there is no material for war housing, if the war effort can continue satisfactorily without more housing, then so be it.

But if more war housing is needed—and it certainly would be blind statement to say it is not—then we want the proper adjustment of materials, specifications, and financing to fit the day-by-day war situation—to supply the greatest amount of housing with the use of the least materials—with a minimum of government ownership and a minimum of post-war repercussions.

Competent builders are being killed off like flies, needlessly and wastefully. Why?

It takes several elements to constitute a going business. You must have them simultaneously, and you can't stop and start your building business alternately every other day.

You must have some reasonable assurance that you can go ahead, and that assurance must bear some resemblance of stability.

Oh, I don't mean that we as builders expect anything to be handed to us on a platter—we know there is a war going on.

Don't think for one minute that the private builder is afraid to gamble. That's not his history nor his reputation; in fact, that's our trouble. Gambling is our failing.

Truly, the private builder is the suicide trooper of the building industry. He isn't asking for subsidies; he isn't asking for parities; he isn't asking for cost plus contracts, price fixing or guaranteed profits.

He's been struggling to be permitted to build more housing per dollar spent than has been appropriated so lavishly under hundreds of contracts for housing let di-

rectly by the government, and which will probably be an annual source of loss to the government.

What does the private builder need and want? Not nearly as much as one would think.

1. He wants to know that he will be permitted to build, regardless of how minimum those specifications might be.

2. If it is decreed that certain war housing is necessary, then it must be likewise decreed that the priority ratings for that material will be effective.

3. He must have co-ordination between the government agencies dictating the supply of materials and the government agencies which dictate the Minimum Construction Requirements which are acceptable for financing.

4. Allied with the previous point, there must be co-ordination between the government agencies which dictate the life of these houses (WPB) by reason of limited materials and specifications, and FHA, which dictates the term of the loan.

We are not hesitant to make a sacrifice for the war. The trouble with us is that we are almost too willing. The going is tough; the risk is great; momentarily we have a little money in the bank, and the war is a good excuse to quit.

But once the private builders quit, they may never go back.

Don't Get Off Merry-Go-Round

A 60-day respite will turn into a permanent vacation. If it's too hard to hang on to a fast moving merry-go-round, you sure are not helping yourself any by temporarily getting off.

I don't know of one single other industry, even in these war times, which is being *permanently* moved into by the government. Automobile agencies are closed, sure, but they'll open up and not in competition with government automobile agencies. Factories have been commanded to

DE TROOPERS of the War Building Industry



WESTCHESTER in Los Angeles where Fritz Burns has demonstrated that private builders can erect war housing faster, better, cheaper and with less of critical materials than public builders.

stop the manufacture of a peacetime article and start the manufacture of a wartime article, but they are still operating as private entities. The government has needed guns, tanks, and airplanes, let's say, more than houses, but the government has not gone into that business. Our business, it appears, is being usurped for *all time to come*.

Now it isn't because we haven't friends in Congress and in government. It is not even part of a diabolical plan. I would not say that it is the part of any overall political scheme, but it is happening nevertheless. And our future is today being molded in accordance with how big a fight we put up to hang on.

If the active builders in this country are reduced to 1,000 instead of 100,000, you can rest assured that the program for private industry as outlined by the powers that be and the allocation of critical materials that likewise follows will be based upon than handful of builders, and public housing will get the rest.

Used Surplus Materials

We have been accused of uneconomical use of critical materials. What has happened is that comparisons have been made as to how much critical material private housing *had used* with what public housing *intended to use* in its new, stripped war apartments and war dormitories. Figures presented have not been fair comparisons.

Until recently, FHA Construction Standards were preserved, and it was impossible for the private builder to do otherwise than obey and follow these standards. The private builder was given very little in the way of priority rating—and A-10 or probably an A-5—nothing more, really, than a "hunting license." He went out and hunted, and the result was that he cleaned up vast stocks of surplus materials.

Now he is accused of having used an unnecessary amount of material. What if other industries were ruled out of business because ist found that the methods of six or twelve months ago do not now fit existing emer-

Westchester



"LIVE CLOSE"
to your work . . .

★
Live within
'WALKING DISTANCE'
to scores of
WAR PRODUCTION
PLANTS

★
Our System of
'Homes at Wholesale'
is providing hundreds of smartly styled dwellings for war workers in a desirable "heads-up community of good address," yet quickly accessible to scores of war-production plants.

2- and 3-Bedroom
House - Lot - Garage
Complete

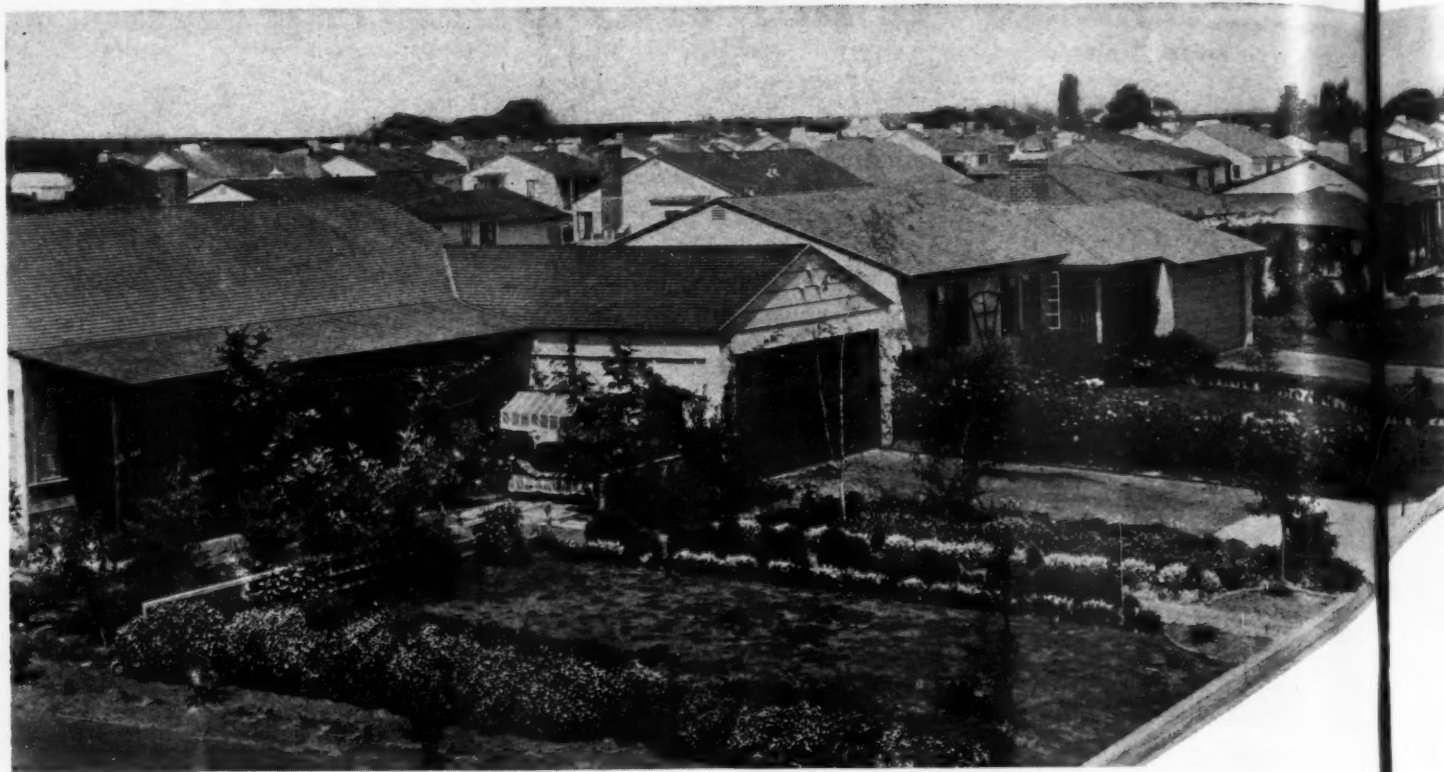
\$4370 - \$4990

Sewers to every lot; paved streets; sidewalks; curbs; driveways; tree-planting. Choice of many attractive designs.

If you are a WAR WORKER,
any reasonable

TERMS

can be arranged to fit
YOUR pocketbook



TOLUCA WOOD, one of Burns' recent Los Angeles developments where low-cost homes are set in charming landscaped surroundings. Thousands of similar homes have been built by private builders well within reach of war workers.

gency conditions created by the fortunes of war. They say private builders cannot do the job. Private building has done the job, and has dipped less into the pool of war materials than public housing.

We are placed in a ridiculous position: we are ruled off the field and out of existence because our specifications, they say, use up too much material. And yet these specifications were handed to us by governmental agencies!

Actually, the record is that private housing has done more with less. We have provided more housing value for the dollar, and by using up already fabricated critical materials, have drawn less upon national reservoirs. In one of our own jobs, we were severely criticized for using steel window sash which had long been considered tabu. But this was surplus stock in the hands of several manufacturers and distributors, and which had been fabricated many months ago. We consider we did a good job in cleaning up these stocks.

Where improved lots are available, the private builder has been the first to use them because they were cheaper and quicker, if for no other reason.

As to housing costs, comparison with public housing has not been fair nor concurrent as to time. The housing value of a detached one-family house for a war worker with his wife and children cannot honestly be compared with that of a war apartment or dormitory. Comparison must also be made where climatic conditions are similar, and with due respect to temporary and permanent housing.

The important point is that private builders will erect the most minimum housing FHA will permit. In fact, we are surprised to find ourselves accused of building too good a house. The horns of the dilemma for the private builder have consisted of the limited material allowed by WPB and the kind of house FHA will insure.

A great deal of damage has been done the private building industry by the misuse of figures. It is the way

that such figures are told to certain government agencies that determines how many houses shall be publicly built, and how many privately built.

Our future is being shaped by such figures as these, and the existence of one of the greatest industries in this country is being pinched out by the spreading of the charge that private industry has failed to do as good a job when measured by war standards of critical materials.

Another charge is that private builders did not rent or sell a sufficiently large part of their output to war workers. In the first place, for many months it was almost impossible to define a war worker. Private builders are now being chastised as the result of a government policy that was loosely defined under the "preference to war workers" provision.

Whatever the inconsistencies of the past due to carelessly drawn policies, it is a fact today that the private builder cannot sell or rent a house to a person without first having that person certified that he is a war worker. Occupancy is further policed by both the FHA and NHA offices, which are guided now by definite rules relative to war workers.

Obligation to Build

Our position as private builders is simply this:

If there is any housing to be done in 1943 or later, it is our obligation to do it.

The private builder can be implemented to do war housing as well as public agencies.

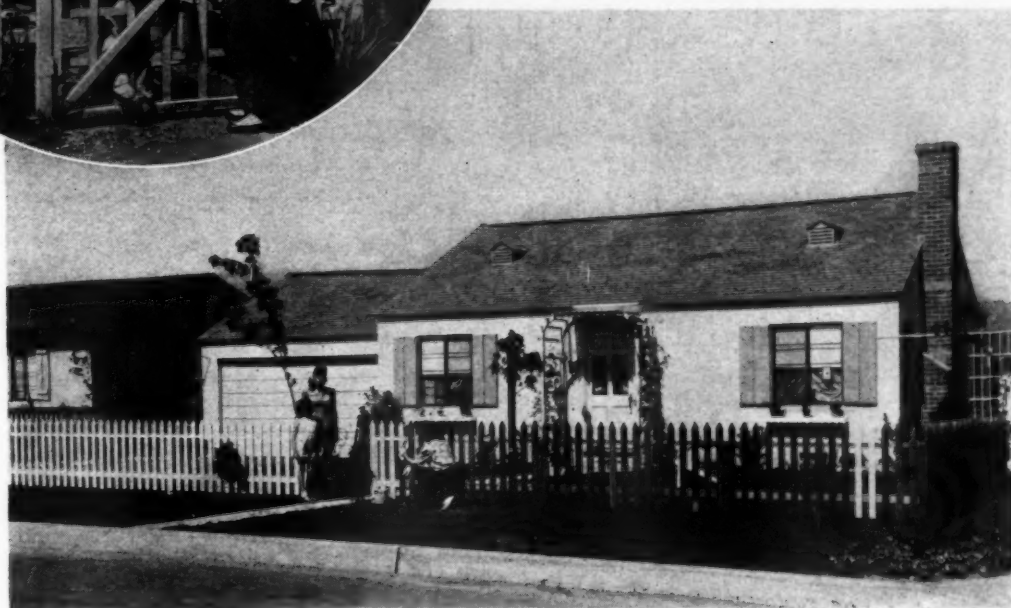
He can be restricted and do it more economically.

He can be mandated to deliver it to the proper parties. Deception is difficult. Houses cannot be hidden and the people in them can readily be interviewed.

Besides the various governmental agencies that the private builder is accountable to, there is a more minute policing—by the institutions which lend the money, and by the dictates of good business economics that exist in free private industry with private capital at stake.

"A real home" can be built for war workers, just as well as shoe-boxes. Private builders like Fritz B. Burns have been providing the kinds of suitable, personalized homes that keep war workers happy and comfortable—eliminate costly production losses due to the worker's dissatisfaction with his home.

ONLY 32 by 28 feet in size, this little Toluca Wood home has a plan with complete livability and charm. Below, right, typical plan of Toluca Wood house; similar plan, slightly smaller, is used in the latest Westchester development of houses in the \$4,500 to \$5,000 range.



If the remaining number of war houses to be built is limited, then they should be done by private industry so that industry may be sustained as long as possible during the war—so that it will be better preserved after the war—and as free as possible from the outright usurpation by public housing which, may I point out, is peculiar to the building industry alone. Other industries are disrupted, many are stopped, but none except the building industry has been usurped by government.

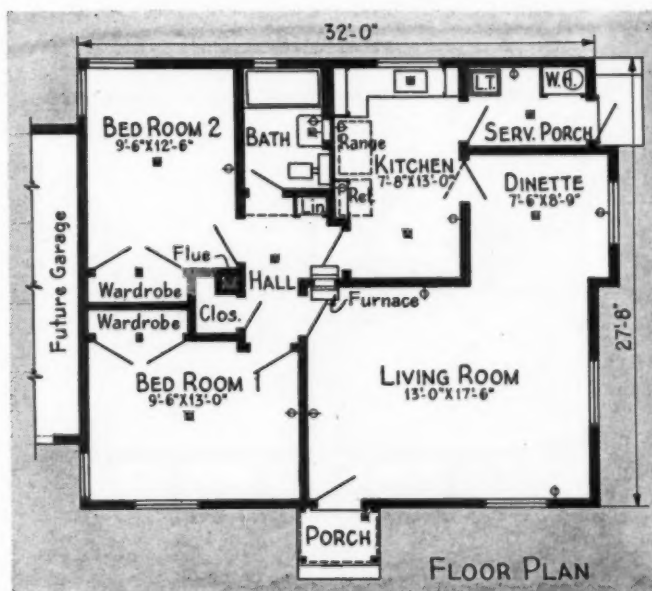
The war gave an unwitting impetus to an ill-born slum clearance program, which probably would have fallen of its own weight.

This housing revolution seriously affects the privately owned home, a great American heritage around which so many of our traditions and ways of life are molded.

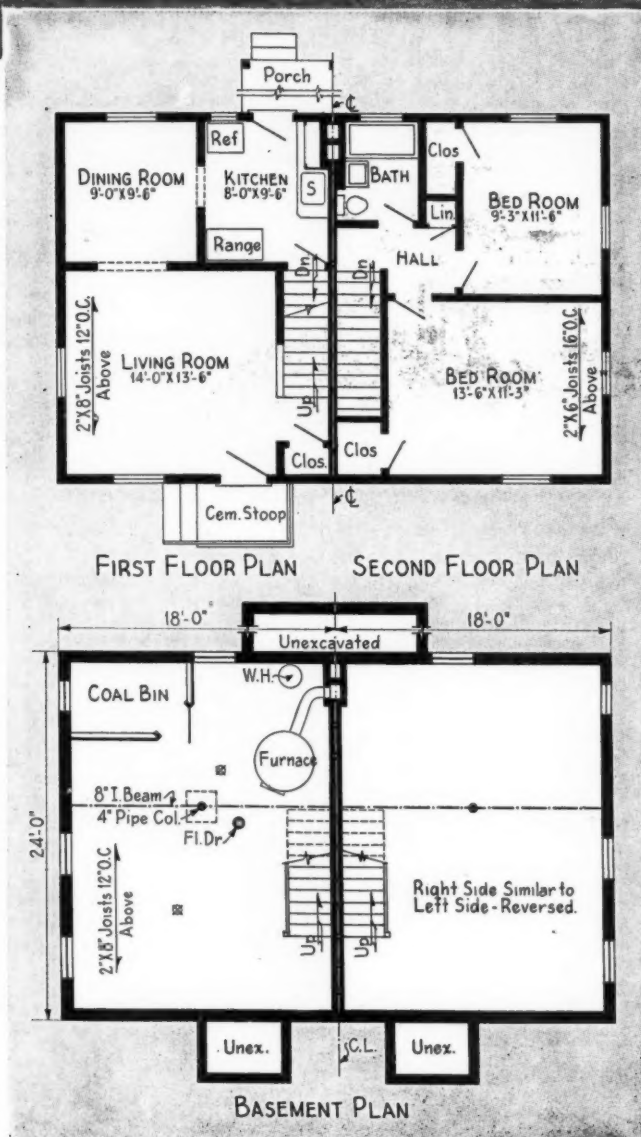
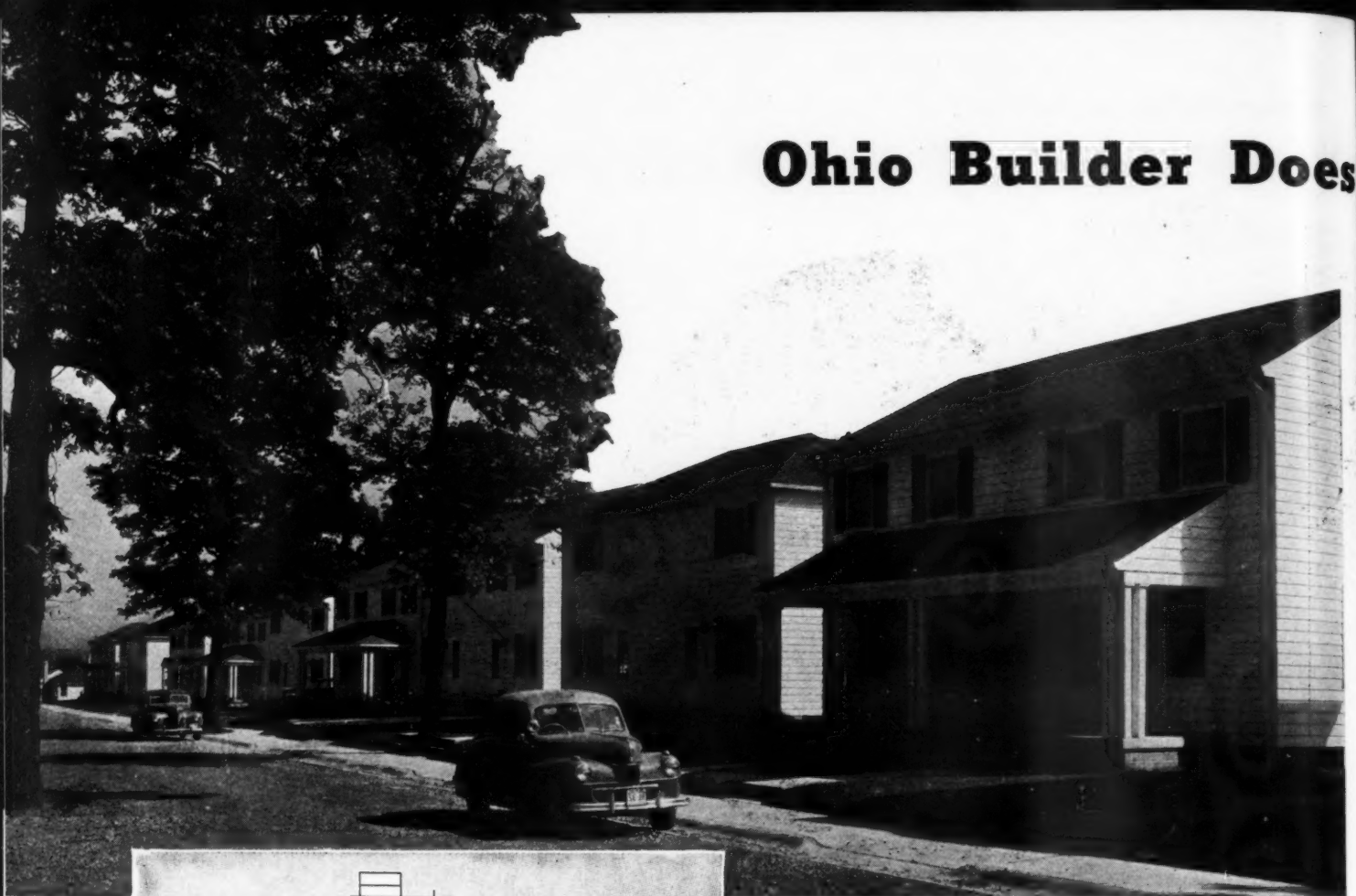
For the war period, there are many sound, *proven*, reasons why private housing is preferable to public. Here are six:

1. Lack of monotony. The personalizing and individualizing of privately owned homes through landscaping, fencing and other exterior adornments, such as trell-

(Continued to page 83)



Ohio Builder Does H



THAT the war effort needs the private building industry's vital product—war housing—has been confirmed by statements from such important men as Blandford, Kahler, Somervell and others. That private builders are able and anxious to do this job has been proved by what these men have already done. BUT, regardless of such facts, these private firms and individuals will have to stop building war housing, or at least work at greatly reduced efficiency if the arbitrary methods of handling such items as setting rents, issuing orders and following these with counter-orders, changing plans of operation, etc., continue as during the past year.

A case in point—the Malowney Real Estate Co., Inc., started 89 war housing units last April after it had been asked by the local field representative of FHA to do some building in Springfield, Ohio. It was pointed out to this firm that it was the only one in Springfield that could do the job in this critical area that badly needed rental housing. Because FHA could not issue commitments at once, the first 24 units were started on financing from the contractor's mortgage house. The first of these was ready July 1 of this year and was rented at \$50 a month—certainly an outstanding job as far as getting workers into houses in a hurry.

In spite of the lumber freeze order and its subsequent revisions, as well as orders affecting other materials which were made during the time this project was under construction, Malowney, or rather the Malowneys, continued their operations. This remarkable firm is operated by a mother and four sons. They

IN STREET of houses at the top of page are typical Malowney units, these being duplexes and apartments (plan at left).

es

**Malowney Real Estate Co.,
builders and brokers of
Springfield, Ohio, works
against long odds but de-
livers war housing on
quality and quantity basis.**



THE MALOWNEYS
—mother and four
sons who have built
over 200 houses in
the last four years
in Springfield, Ohio.

have been building in Springfield since 1938, completing between 200 and 300 houses. The firm's normal practice is to buy acreage in an area of town that needs new homes, and develop a street two or three blocks long. If utility improvements are not available, they install their own, pave the street, and add it to the cost of the property. To do this kind of a job, they normally employ a crew of between 100 and 200 men; equipment includes ten trucks, their own cement mixers, and similar items. In other words they are a building firm of above average size. With this many men on the payroll, it doesn't take long to go broke if numerous occurrences hold up work.

Of course, any builder that weathers the game for any length of time gets toughened to hardship and trouble of all kinds. The Malowneys are no exception, and it is quite likely that this story would not have come to light if on Sept. 21 Charles R. Malowney had not put in a long distance call to *American Builder's* Chicago office. On that day he had finally come up against a government order that had him stopped and wondered if there was any advice which this publication could give him to help him out of what looked like a hopeless entanglement in bureaucratic red tape.

At that time the OPA rent-fixing set-up had finally gotten him really behind the "eight ball." His tenants had been advised that, instead of the \$50 rental which they had been paying, this bureau had decided on \$37.50 per month as the proper rent. It can well be imagined the position the Malowney Co. was thus put in as far as their tenants were concerned—rent gougers, to say the least.

Without going into all the legal aspects of this case, covering considerable time, delay, etc., it will suffice to say that it was all straightened out—just another govern-

—but bureaucratic red tape and conflicting orders do their best to put the builder out of business. —————→

ment mistake—the \$50 fair rental first set being allowed.

In spite of this disheartening show of lack of government understanding regarding the building picture, the Malowneys have since continued their program of building apartment, duplex, and single-family units. Included in this program is an interesting experiment in minimum housing which this firm calls its "Liberty House." It consists of a single room which has all the facilities for housekeeping, along the lines of a trailer and was developed early in 1942 to enable the company to keep their crews intact.

The Liberty House is entirely constructed by the panel method, in their own shop, and completely assembled in their yard. When finished, it is loaded onto a truck, moved to the site, and set on a foundation prepared for it.

(Continued to page 72)

[illegible]



Power Equipment Speeds Big War Housing Job in Face of Serious Delays

How three Stackhouse brothers rush 273-house Title VI project to relieve acute shortage in Mobile, Alabama. Speed-up of 50 per cent though power saw pre-cutting schedule offsets today's handicaps due to war conditions

FOR ANY builder who thinks his troubles are exclusive and include everything that could possibly happen, here's a case of nearly total grief, and how it was licked. Take all the various problems that must be met in turning out 273 houses, even under ideal conditions; add the difficulties that stack up when such a project must be rushed to meet a housing shortage; mix in for bad luck a liberal portion of such extras as continuous rain, no promised water supply or sewers, and shortages of labor, materials, equipment, and accommodations for workmen.

That's the set-up that faced Stackhouse, Inc., a firm of three brother-builders—Everett, L.D., and R. D. Stackhouse—on its Brookley Heights development, a Title VI project at Mobile, Ala. But here's how this enterprising Stackhouse team beat these handicaps and did their part to relieve the housing situation in that gulf city where 2,000 units are going up, part of them under Title VI, others under the Maritime Commission.

First, what was probably the greatest setback was the failure of the city to come through, as promised, with a water supply, forcing the developers to put in their own centrifugal pump for a well bored on the site. The city has agreed to purchase this water-system if and when a municipal water supply is made available, but this will not cover the cost of boring the well and installing the pump. Also, a central sewage system was not available, so septic tanks had to be installed for each house. And while there was no water supply below ground, several weeks of driving rain added to the construction difficulties above ground. In fact, the site

became such a mudhole that it was sometimes necessary to pull loaded trucks around on bob sleds with tractor power.

When field offices were set up on the front of the property, the builders found that the next job would be to provide a place to bunk and feed some of the men on the job. Quarters were built and a cafeteria run during the operations.

To keep the job progressing in the face of material and equipment shortages, storage sheds large enough to take the contents of six or more box cars were erected alongside a railroad spur. In them a reserve was built up to tide over delayed deliveries; even a high priority rating for the project did not eliminate the need for chasing materials.

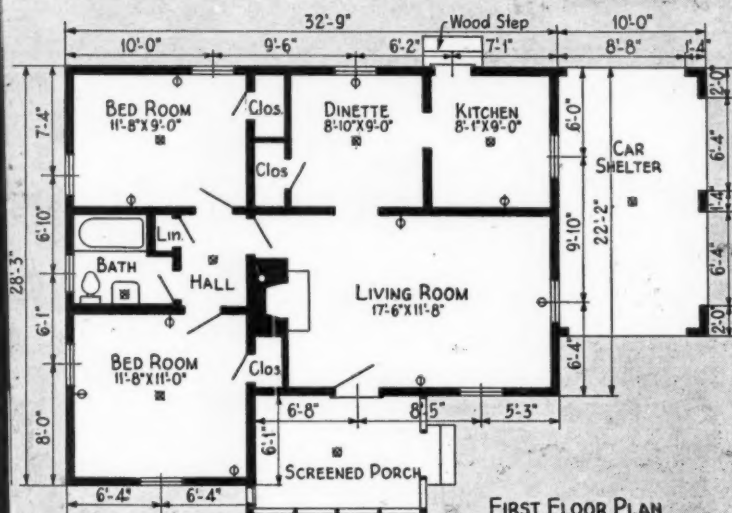
To offset the time loss through innumerable delays such as some of those described above, a very efficient production schedule had been set up. This involved the use of power equipment, both on the job and in the Stackhouse shop in Birmingham. Because the labor supply was more plentiful there than in Mobile, and since the shop was already operating, all millwork including door and window frames, screens, mantels, porch columns and ventilators, was fabricated in that plant.

All framing was pre-cut on the job according to a cutting schedule furnished the power saw operators. Each piece was marked as it came from the saw, so as to show the type of house into which it fit and the exact location as per blueprint. The pre-cut framing was stored in bins until needed and then trucked to the in-

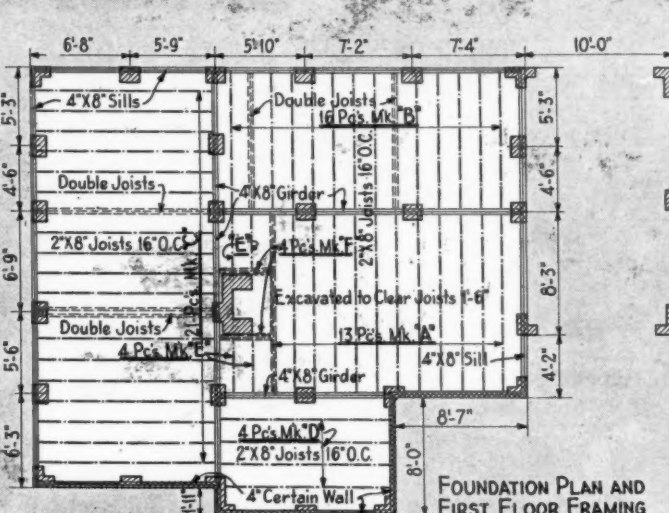


SPEED METHODS ON WAR HOUSING JOB

AS SHOWN in views above, top to bottom: Various stages of construction, with floor being laid in foreground; framing being pre-cut on the site, using a Walker-Turner radial saw; and then these members are stacked in numbered bins until picked up for trucking to a house job (note signs above stacks); in the Stackhouse Birmingham cabinet shop, another Walker-Turner radial saw cuts millwork preparatory to assembly in this same shop. It is then trucked to Mobile for use in this Brookley Heights project. Above, on the opposite page, is a street view of some of the completed houses and, in the insert, the builders: Everett G. Stackhouse, president and buyer; R. D. Stackhouse, secretary and office manager; and L. D. Stackhouse, superintendent of construction.



FIRST FLOOR PLAN



FOUNDATION PLAN AND FIRST FLOOR FRAMING

ABOVE: Typical Title VI house in Brookley Heights project; prefabricated panels for garage, painted and stacked awaiting erection; one of the seven different floor plans for which there are 34 different exteriors in all, and foundation plan with sample precutting schedule for joists with each length marked and numbered. Right: Materials for this 273-unit project being unloaded on railroad siding.

dividual house job. Over each bin was also a sign indicating the contents. Workmen soon learned to recognize the various pieces by sight.

Power equipment used on the job included a Walker-Turner radial saw to cut framing (another Walker-Turner unit is used in the builders' Birmingham mill-work shop), a Carter lock mortiser, a Carter hand planer and a Skilsaw for cutting off the ends of rafters, etc. A generator set was installed on the premises to supply power until a connection could be made with power lines.

Garages, for houses with the unattached type, were completely prefabricated in the field shop, including the painting, and then erected in panels on the job. Some houses have garages of the open or porte-cochere type. (See house above.)

In order to speed up operations on the job, carpenters were divided into crews and competition between them encouraged. One crew put up sills, joists and girders, another put down subflooring and tracks, and others came along and raised framing and doubled plates, etc. Still another crew erected rafters and decking. Each crew was required to handle at least two houses per day. Other crews caught up odds and ends and one crew did nothing for a time but erect the prefabricated garages. As all framing for the houses had been pre-cut, operations were speeded up at least 50 per cent over old methods where everything is hand sawed on the job.



Houses could be seen in all stages of construction; in fact, the first houses erected were occupied by purchasers before the foundations for the last ones were laid.

Seven different floor plans and 34 different elevations were used in the construction of the houses which are pronounced among the finest to be built in the South under Title VI. Most of them are of five rooms, but some
(Continued to page 84)

And Now—Construction Industry Is Licensed

New pricing formula set up under MPR-251

MAXIMUM PRICE Regulation No. 251, effective Nov. 5, in one swoop accomplished three things. It, in general, continued the ceilings which were in effect during March, 1942, but made allowances for the increases in labor costs between March 31 and July 1, 1942; it established maximum pricing formulas based on three different types of sales: sales of all types not in excess of \$500, sales in excess of \$500 on a cost-plus basis, and sales in excess of \$500 on a lump-sum basis; it automatically licensed, as a condition of doing business, all contractors, builders, installers and erectors providing materials or services on an installed or erected basis.

The regulation covers construction and repair work when done by the "job," but does not apply to the wages of persons performing these jobs. A roofing contract, for example, that named a price for the entire job is covered by the regulation, but if a householder bought roofing material and employed a roofer to lay it, neither the roofer nor the householder would be subject to the regulation.

The field covered by the regulation is so broad, however, that it extends from the repair of a leak in a roof to a great project like Boulder Dam.

Ceilings are established on such ordinary work as household repair and service jobs by plumbers, paper-hangers, carpenters and electricians.

A short formula has been outlined for sales below \$500.

This is: To the price which would have been charged for the sale in March, 1942, the seller may add the increases in labor costs on the job up until July 1, 1942. The result is his maximum price.

For contracts of more than \$500 on a basis of cost plus a percentage of cost, or cost plus a fixed fee, or any other basis in addition to cost, maximum prices are to be computed as follows:

1. Materials and supplies at actual cost.
2. Labor at actual cost, but in amount not to exceed labor costs at rates in the area of installation in effect on July 1, 1942.

3. Other direct actual costs, including cost of sub-contracts.

4. Margin for overhead and profit at March (1942) rates, based on a comparable sale, or under certain circumstances, the seller's general experience and that of the industry.

In contracts of more than \$500 on a lump-sum basis, maximum prices are to be computed as follows:

1. Estimated cost of materials and supplies.
2. Estimated labor costs on the basis of rates in the area of installation in effect on July 1, 1942.
3. Estimated other direct costs, including sub-contracts.
4. Estimated reserve for contingencies.
5. Estimated margin for overhead and profit at March (1942) rates, listing the method by which this is computed.

Every contract entered into, excepting those of \$500 or less, after the effective date of the new regulation, must be reported to the Office of Price Administration. The agency has designed a system for filing these reports, permitting contractors, where possible, to use copies of their estimating sheets and other ordinary cost formulas. They must be filed within ten days after the award of the contract.

Not less than ten days preceding final settlement under a lump-sum contract, the contractor is required to file a further report with the Office of Price Administration, setting forth the actual costs of the various items indicated in the original estimates on file.

It is the responsibility of the contractor, in all instances, to have a copy of the new regulation available for examination by his purchasers.

Other high points of the order are:

Bonuses: Prohibited except upon specific approval of the Office of Price Administration.

Certificates of Compliance: Mandatory in sales of more than \$500; may be demanded by purchaser in sales of less than \$500.

Questions and Answers to MPR—No. 251

The following explanatory questions and answers on Maximum Price Regulation No. 251—Construction and Maintenance Services and Sales of Building and Industrial Equipment and Materials on an Installed or Erected Basis—were released by the Office of Price Administration.

Q. What does the new regulation do?

A. The new regulation prescribes specific methods of determining maximum prices in the construction industry.

Q. What persons are subject to the new regulation?

A. It covers all contractors, builders, installers, and erectors supplying construction and maintenance services or making sales in which they furnish building or industrial equipment or materials, together with the labor or services required for actual construction, installation or service.

Q. Does the regulation cover contractors, builders, installers, and erectors who supply labor only?

A. Yes, except that services rendered by an employee to any employer are not covered. Anyone supplying a service common to the construction industry where actual construction, installation or service is sold in connection with a fixed structure is covered. This includes, for example, the installation of a boiler.

Q. Are suppliers of material only subject to the regulation?

A. No. Actual labor or services must be supplied, in addition to materials. Sales of materials are covered by other regulations.

Q. Are owners who do their own building, installation, or erection covered?

A. No, except insofar as they have certain responsibilities as purchasers.

Q. What are their responsibilities as purchasers?

A. To refuse to purchase above maximum prices. For their own protection, they should obtain a written affirmation of compliance and should acquaint themselves with the provisions of the regulation, copies of which must be made available by the contractors.

Q. What must a contractor do before accepting a job?

A. He must notify the purchaser of the existence of the regulation, and upon request, show a copy to the purchaser.

Q. May bonuses be paid or provided for in the contract?

A. Not unless special permission to do so is granted by the Office of Price Administration.

Q. Is shipbuilding or aircraft construction included under the regulation?

A. No.

Q. Are contracts for buildings for use in connection with the ship and aircraft industries included?

(Continued to page 75)



FRANK W. CORTRIGHT

THE BUILDERS of war housing throughout the country during the last nine months have been constantly faced with great difficulties in securing many of the necessary materials. Their resourcefulness has been taxed to the utmost in acquiring nails, plumbing and heating fixtures, copper wire and many other items, but somehow they have successfully met all of these problems. This is evidenced by the completion of more than 250,000 dwelling units by private enterprise during the first nine months of this year.

The shortage of softwood lumber, however, may well be the most serious problem with which war housing.

MASONRY for war housing

Here's how to conserve lumber and nails. Study shows 50 per cent saving in lumber at 4 per cent higher cost.

both public and private, has had to contend. The War Production Board has estimated that the need this year will approximate 38 billion board feet, and it now appears that production will fall to approximately 15 billion board feet short of this amount. Labor shortages and the lack of foresight in allocating sufficient rubber upon which most lumber is hauled these days largely contribute to this condition. The net result is that a drastic horizontal cut must be made in all requirements including war housing.

Anticipating this condition and recognizing the importance of determining satisfactory substitutes, the National Association of Home Builders of the United States, formerly the Home Builders Institute, arranged with the Structural Clay Products Institute for a comparative study of masonry and frame to be made. The purposes of this study were: first, to ascertain the exact amount of lumber and nails which could be saved by brick and tile wall construction; and second, to determine the comparative cost of masonry and frame. The results were surprisingly encouraging to those of us who hoped that this might be a partial solution to the problem.

MASONRY RESIDENCE, WASHINGTON, D. C.

	LABOR	MATERIALS
1. Excavation	\$ 40.00	
2. Concrete	39.73	\$ 126.31
3. Masonry Work	633.61	562.39
4. Lumber	460.05	421.18
5. Millwork	312.49	345.57
6. Hardware		41.94
7. Plastering	161.59	164.25
8. Roofing and Flashing	159.12	220.70
9. Painting	180.13	55.29
10. Plumbing		360.00
11. Heating		675.00
12. Electrical		205.00
TOTAL	\$1,986.72	\$3,177.63
		1,986.72
Net Cost*		\$5,164.35
10% Contractor's Profit		516.44
TOTAL COST		\$5,680.79

*Exclusive of overhead, insurance, architect's fee, etc.

FRAMED LUMBER RESIDENCE WASHINGTON, D. C.

	LABOR	MATERIALS
1. Excavation	\$ 35.00	
2. Concrete	148.67	\$ 175.10
3. Masonry	40.59	24.74
4. Lumber	743.06	810.50
5. Millwork	343.90	373.59
6. Hardware		42.84
7. Plastering	161.59	234.93
8. Slate Roof and Flashing	131.51	176.60
9. Painting	261.25	73.63
10. Plumbing		360.00
11. Heating		675.00
12. Electrical		205.00
TOTAL	\$1,865.57	\$3,083.25
		1,865.57
Net Cost*		\$4,948.82
10% Contractor's Profit		494.89
TOTAL COST		\$5,443.71

*Exclusive of overhead, insurance, architect's fee, etc.

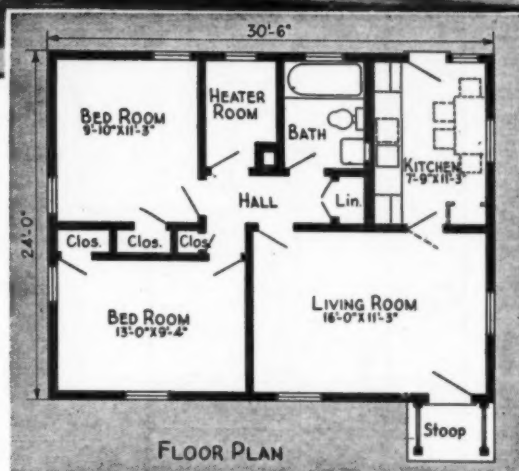
By Frank W. Cortright

**Executive Secretary
National Association of
Home Builders**

**NATIONAL Homes Foundation
War Home V-1b selected for study
of masonry costs, lumber savings.**

It was found that a saving of 50 per cent in lumber and 45 per cent in nails was effected by masonry construction. The overall cost (including contractor's profit) based on the wage scale now existing in the District of Columbia was only four percent greater than the frame house. A large part of the war housing to be built from now on by private builders will be rented for an extended period of time. It, therefore, was felt that the substantially lower maintenance cost and depreciation factor more than offset the original difference in construction cost. Furthermore, carpentry labor is becoming a serious problem, whereas there is a surplus of bricklayers and masons in most areas. Harry C. Bates, of the Brick Masons and Plasterers International Union, recently stated before the Lanham Committee that ample quantities of brick and tile, and the workmen to lay them, are available within a short distance of any war plant in the United States.

With the approval of administrative officials, a four-room dwelling of standard design costing less than \$6,000 was selected. An independent, reputable, and experienced estimator was retained to make the study. The plan selected is known as the National Homes Foundation War Home V-1b. It is
(Continued to page 85)



**BRICK and masonry details
appear on the next page.**



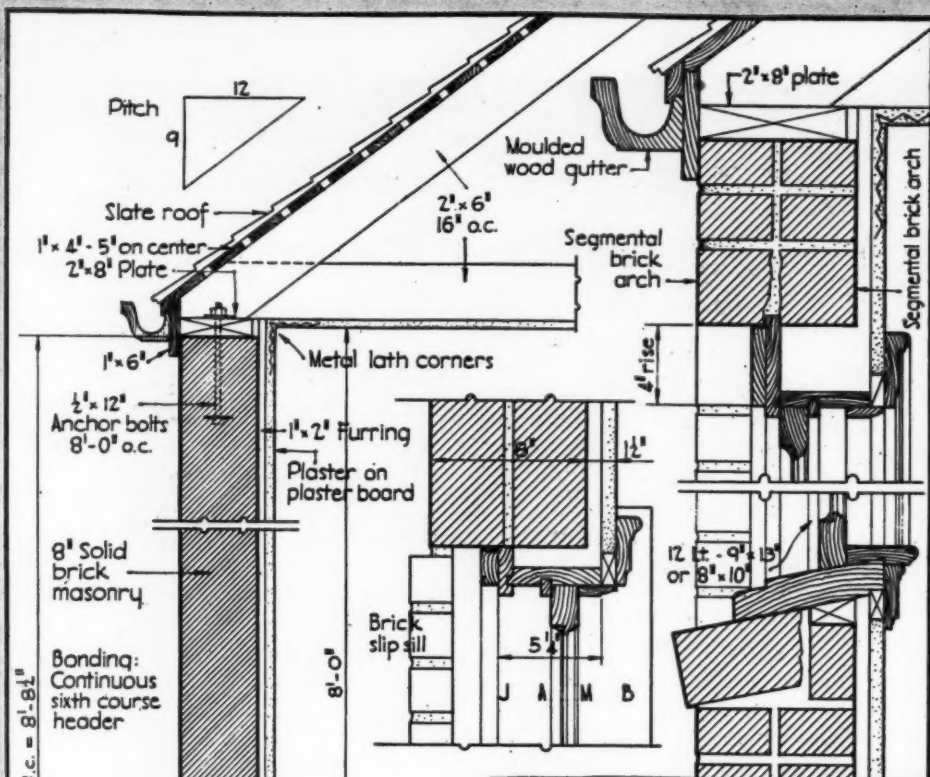
AMPLE SUPPLIES of brick and masonry products, as well as workers, are indicated.

CRITICAL MATERIALS REQUIRED

Masonry Residence		Framed Lumber Residence	
Plates	85 B.M.	Plates	216 B.M.
Ceiling Joist	656	Sills and Girders	230
Studs	864	Floor Joists	947
Rafters	892	Ceiling Joists	664
Miscellaneous	18	Studs	1,912
Roof Sheathing	1,268	Rafters	786
Furring	50	Roof Sheathing	1,268
Furring	160	Floor and Wall Sheath-	
Grounds	166	ing	2,365
Grounds	9	Furring	21
Sleepers	280	Furring	183
Oak Floor	920	1 x 10 Siding	1,180
V Ceiling	20	Trim	10
Shelving	47	Oak Floors	920
		V Ceiling	32
		Shelving	23
Total	5,435 B.M.	Total	10,757 B.M.
Nails	3 Kegs	Nails	5½ Kegs

SAVING OF CRITICAL MATERIALS SUMMARY Masonry Residence Over Framed Lumber Residence:

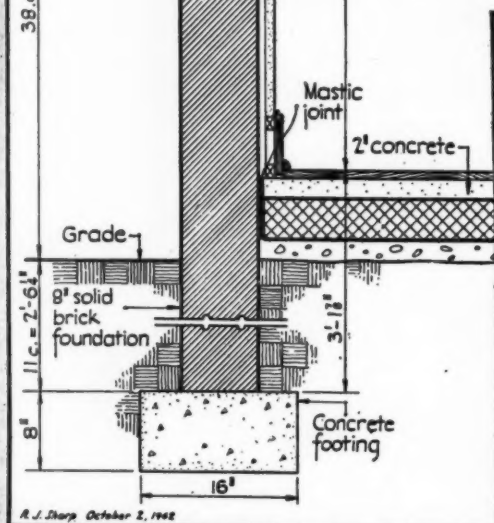
Lumber	5,322 Board Feet per House
Nails	2½ Kegs per House



LEFT: Exterior wall, window and floor details for typical brick masonry house. New War Production Board construction standards require builders to conserve lumber and nails where possible.

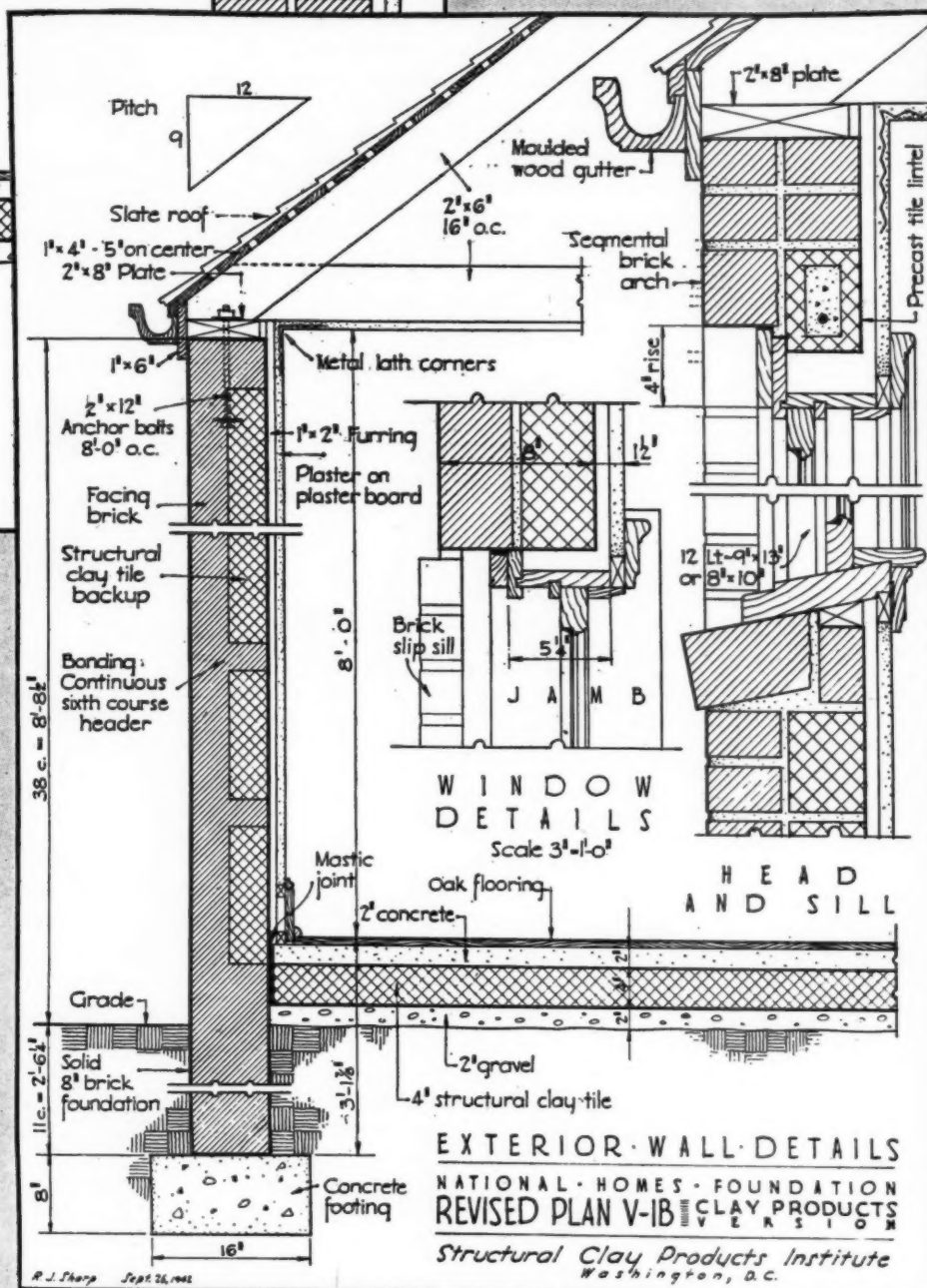
Material shortages cannot and must not be allowed to stop home building. These details meet new WPB requirements

48



Latest approved details for brick and masonry construction in war housing

RIGHT: Brick construction with structural clay tile backup, fully detailed for use in small war worker home. National inventory shows ample supply of masonry products and needed labor.



WINDOW DETAILS
Scale 3/8"=1'-0"

HEAD AND SILL

EXTERIOR WALL DETAILS
NATIONAL HOMES FOUNDATION
REVISED PLAN V-1B
CLAY PRODUCTS
Structural Clay Products Institute
Washington, D.C.

New WPB War Housing Standards

Opens Opportunities to Builders Who Operate on Scattered Lots

EMPHASIZING that single-family detached units in particular, and other types of construction in general, be located where possible upon sites adjacent to existing utility lines, the new War Housing Construction Standards offers new opportunities to builders able to operate upon scattered lots.

Practically eliminating the so-called typical frame house from the war housing picture, the new WPB war housing standards, effective Oct. 28, 1942, gave the come-on to brick, cement brick, structural tile, cement and concrete block. Though exceptions from laid-up masonry construction are provided for in areas where masonry materials, or labor, are not obtainable, or where earthquake construction in areas like California make the use of masonry inadvisable.

Like an upraised traffic policeman's hand, the new directive blocked softwood finished flooring and sub-flooring, slowed up the use of wood wall sheathing to allow such materials as fiber, insulation, and gypsum boards to pass. Plywood was channeled to such uses as built-in features, gusset plates, and prefabricated factory house sections; prohibited in dwelling structures where frames are fabricated on the site. Only beveled siding up to and including 8 inches in width is allowed. Lowest lumber grades practicable and species available are given the nod, while selective specifications are barred. Minimum use of lumber and other critical materials is the objective.

For details and exceptions the text of the War Housing Construction Standards are included as follows:

Text of Directive

Effective as of the date of these standards, the War Production Board will not issue preference rating orders for new prefabricated or site constructed housing unless their construction complies with the provisions of the following paragraphs, and a minimum of critical materials and lumber is used, and will not extend the term of preference rating orders previously issued for housing projects except where (a) the preference rating order has been applied to the purchase of materials, or (b) prefabrication or construction of the project has started, or (c) the construction of the project complies with the standards outlined below:

1. Single-family detached units, whether for rent or for sale, shall be constructed only where the essential utilities are contiguous to the lot, except where other types of dwelling units clearly would require the use of a greater quantity of critical material. All other types of construction shall be located, insofar as possible, upon sites adjacent to existing utility lines.

2. All rental projects, whether of single-family detached, semi-detached, row or multi-family structures, shall be designed without regard to the future separation of a portion of the project, and with a minimum of critical materials in the plumbing, heating, and electrical layouts, and in the utility installations on the site.

3. All structures shall be laid-up masonry, or other lumber substitute exterior wall construction, except in those areas where masonry materials or labor are not obtainable. Laid-up masonry means walls or floors constructed of clay or concrete products such as brick, structural clay tile, cement or concrete blocks, and cement brick. Any other method of construction permitted by the War Housing Critical List may be used, provided the total softwood lumber used for framing, sheathing, and siding does not

exceed the following maximum allowances in board feet per square foot of floor area.*

	Family Dwelling Units			
	1 or More Bedrooms	No Bedrooms	Dormitory Accommodations	Community Facilities**
1 Story Structures.....	5.3	5.6	5.4	7.1
Structures Having More Than 1 Story	4.7	4.9	4.8	—

*Floor area shall be measured at each principal floor level to the outside face of exterior walls and to the center line of common walls.

**Community facilities include buildings or portions of buildings, exclusive of basement space, used for administrative, recreation, or commercial purposes, including infirmary or dining facilities.

4. Floor area for family dwelling units shall not exceed the following maxima based on the number of bedrooms within the unit:

	Maximum Allowances in Square Feet			
	No Bedrooms	1 Bedroom	2 Bedrooms	3 Bedrooms
1 Story Structures	340	560	720	900
2 or More Story Structures	420	680	800	960

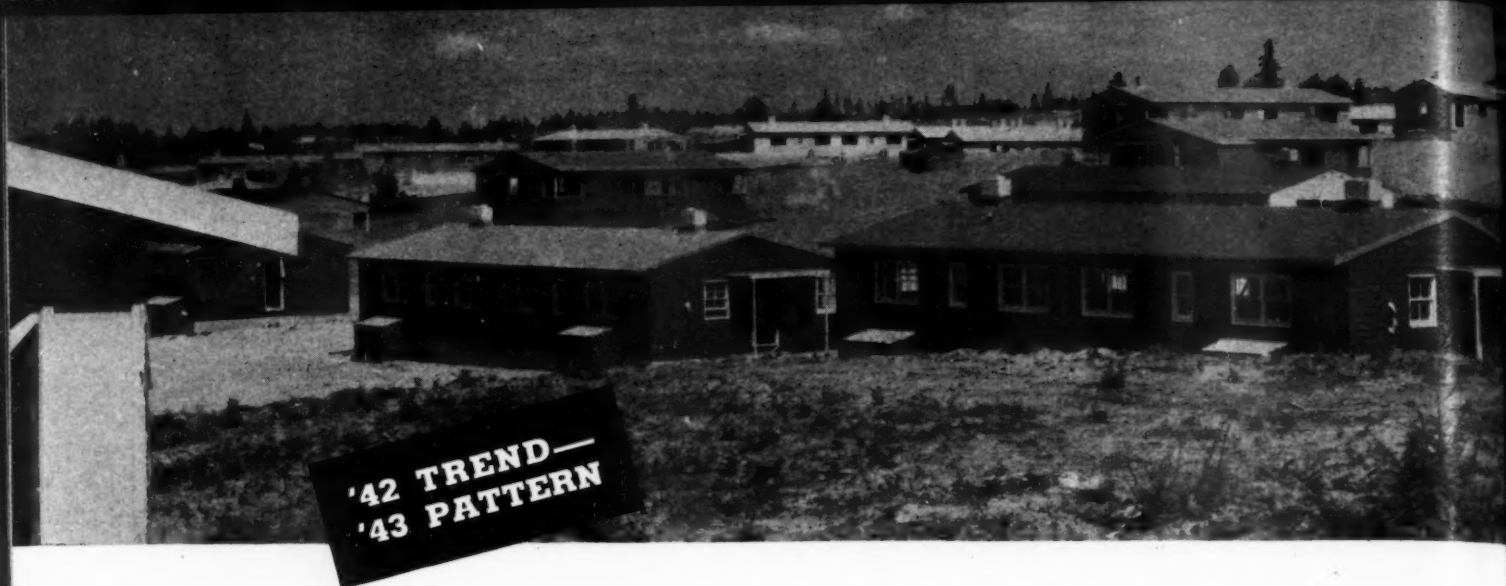
5. All types of construction shall use a minimum of lumber. To meet this objective, the following requirements shall apply:

A. Designs shall be based on the use of the lowest suitable grades and most available grades and species of common lumber for framing which shall be so sized and spaced as to effect the most economical utilization of stock.

(Continued to page 86)

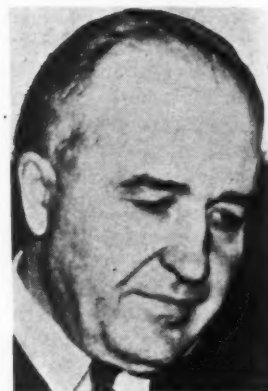
New War Housing Rulings:

1. Single family homes restricted to lots where utilities are available gives builders who can function on scattered lots a break.
2. Utility restrictions and material restrictions indicate that multi-family projects are also in an advantageous position.
3. Brick, concrete, wallboards of all types, insulation, hardwood flooring, have greater opportunity to be worked into war housing.
4. Any method of construction permitted by the War Housing Critical List can be used, provided total softwood for framing, sheathing and siding does not exceed maximum allowed.
5. Single-family detached, semi-detached, and row type dwelling units must be arranged so not more than one plumbing stack will be required, which allows back to back, or bathroom over kitchen installations.
6. Small dwelling units are limited to specified types of heating plants, but large projects where heating system serves four or more dwelling units are restricted on a pounds of metal per 1000 Btu formula.
7. Chief object of the War Housing Construction Standards is to conserve softwood lumber and other critical materials.
8. Preference rating orders will not be issued or extended unless: (a) the preference rating order has been applied to the purchase of materials; (b) prefabrication or construction of the project has started; (c) the construction of the project complies with the new standards.



Prefab Methods Speed Seattle Housing

**Boespflug Construction Company combines
factory and site fabrication on 2000 home
unit projects at Renton Highlands, Wash.**



J. C. BOESPFLUG

UTILIZING the advantages of both site and factory prefabrication, contractors at Renton Highlands, adjacent to Seattle, Wash., are now rushing to completion 2000 war workers' homes in record time. By combining the advantages of site-fabricated exterior walls, floors and roofs, and factory-prefabricated interior partitions and interior Speedwall Board cut to exact lengths, J. C. Boespflug Construction Co. has been able to effect notable savings in both time and materials, according to W. C. Miller, general superintendent. The 900 workmen now on the job expect to be able to finish work on the housing contract early in December.

This FPHA project is spread out over 400 acres on a sloping site overlooking Lake Washington, and is being built under the sponsorship of the Renton Housing Authority, Paul W. Houser, Jr., executive director.

Of different types of construction, the homes in Renton Highlands are divided into three groups. The first is a 500-unit group of permanent homes, which were virtually completed and ready for occupancy the middle of October.

The other two groups, comprising 700 and 800 houses

respectively, are the demountable, prefabricated type.

The 500 permanent homes are nearly all single-family units and have one, two, three or four bedrooms. They are built on concrete foundations, have no basements, and are of lath and plaster construction. The houses are painted inside and out, the exterior colors being varied to give as much individuality as possible.

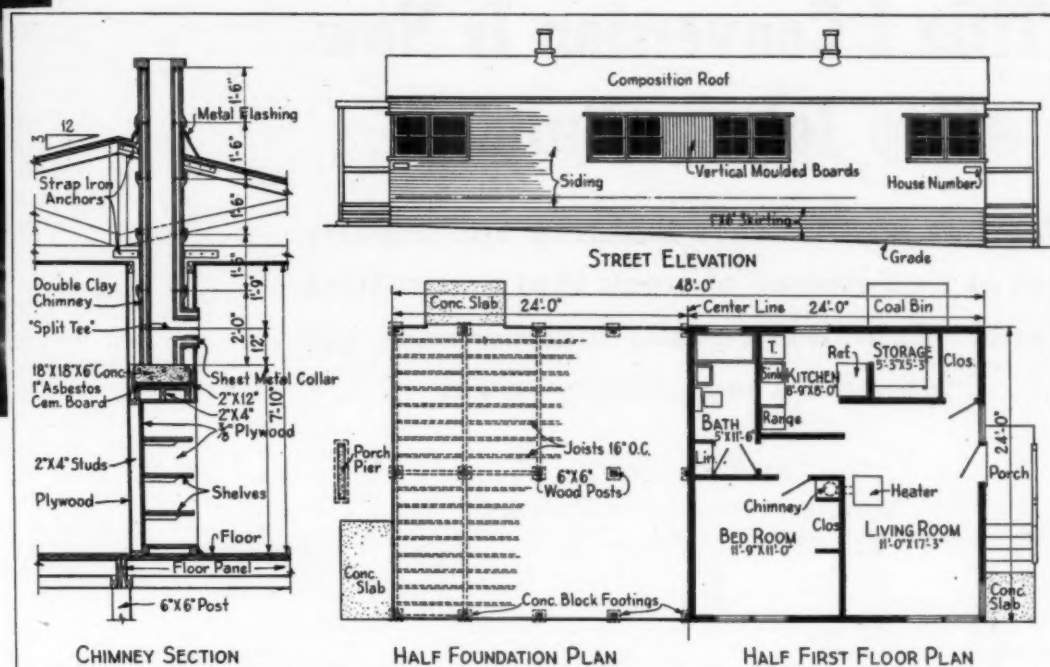
The 1500 prefabricated temporary dwellings are mostly duplex, with a few single-family and a few three-family dwellings. Like the permanent homes, these houses have one to four bedrooms.

With the exception of the wall partitions between rooms, contractors chose to fabricate on the site the 1500 temporary homes. Wall sections, roof trusses, etc., are cut to measurement in the "cut-up-yard." Walls are broken into panels and nailed together at the "saw yard" and then hauled to the building sites where the houses are set into place. The homes are built on wooden framework anchored to concrete block piers.

The partition wall sections of the homes were prefabricated in the factory of The Speedwall Company,



"CUT-UP-YARD" on Renton Highlands Housing Project where exterior wall sections, roof trusses, etc., are cut to measurement.



RIGHT: Three-room duplex layout for war workers.

where approximately 22 miles of walls were run off the production line for this project. These walls are glued, instead of nailed to the studding, giving a much stronger construction, as the plywood bears the full share of the load of the wall and does not hang on the nailed members. Room-size board is made in the company's plant in Seattle. After the board comes off the production line, it goes through a process of being glued to the studding to form prefabricated partitions. These are put into a "hot-box press"—as many as 20 at one time (320 lineal feet of wall)—to make prefabricated wall sections.

Contractors found distinct advantages in these partitions and plywood inside finish board cut to exact lengths. They stated that use of this material reduced the amount of labor on the project. Specifically, if these prefabricated partitions had not been used 18 per cent increase in skilled labor on the job would have been required. Cutting the board to exact lengths saved approximately 350,000 square feet of plywood which would have been wasted in cutouts for door and window openings. And the use of construction glue in prefabricating the walls saved nails and lumber to the extent of 37,500 pounds of nails

and approximately 320,000 board feet of dimension lumber for partition framing; since studding would have been 2x3's instead of 1x3's if the Speedwall Board had been nailed instead of glued to it.

None of the demountable homes will be painted on the inside, but may be finished as the occupants desire. Exteriors of these homes, like the permanent dwellings, will be painted in differing colors.

A feature of these homes is the attached coal bin. All houses will be heated by coal-burning space-heaters and coal-burning cook stoves. Each will have a refrigerator.

In order to furnish residents of Renton Highlands with business and shopping facilities, plans have been drawn up for two community recreation buildings and a shopping area inside the project. Included are a fire station, clinic, post office, drug store, super market, beauty parlor, barber shop, shoe repair, cleaning service, etc.

Architects for the 500 permanent homes and the 800-unit prefabricated homes were John Paul Jones, Frederick T. Ahlson and Paul Thiry, all of Seattle. Architects for the 700-home unit were George W. Stoddard and Frederick T. Ahlson, also of Seattle.

INTERIOR of a duplex demountable house at the Renton Highlands project. Prefabrication Speed-wall partitions shown stacked at right are ready to be put in place on the toe-plates.



Title I Conversion Is Now Top Job for Builders

**Seen as best private building opportunity
out of five classes of work that can still be
done. Essential repair, maintenance get
new AA-1 top priority rating**

By E. H. Christy

**Secretary, Material Men's Club,
Asbury Park, N. J.**

WHAT is the present position and immediate outlook of the average builder? Of the man who, up to now, built houses, stores and moderate-size commercial and public structures? Is he licked by war conditions, or can he still operate? If so, how?

Let us first briefly relate what has happened to him. Increasing shortages of materials and labor—uncertainties about being able to finish jobs started—competition of Federal-built housing—withdrawal of lending institutions from the building field due to greater risks—and most important, Government restrictions and priorities.

It all came to a head last April when the War Production Board issued Order L-41, setting a top limit of \$500 for labor and material on residential jobs (except war housing). Then L-41 was further tightened on Sept. 7th. The previous and present limits follow:

Type of Construction	Previous Limit	Present Limit
Residential	\$500	\$200
Multiple residential	\$500	\$1,000
Agricultural	\$1,000	\$1,000
Industrial	\$5,000	\$5,000
Certain types of commercial	\$5,000	\$200
Other types of commercial, including highway, sub-surface and utilities	\$5,000	\$1,000

On May 13th came Order L-121 freezing all construction lumber at the mills except for Army and Navy pur-

poses. L-121 was supplanted August 27th by M-208, which placed mill shipments of construction lumber under priorities. Requirements for privately-built war housing, repairs, maintenance and similar needs were included, but their rating of A-1-a is practically useless in the face of mill files loaded with higher ratings, AAA, AA-1 to AA-4. While yard replacements of lumber sold for the same needs were at first rated at A-1-a, this provision was quickly revoked. Which meant that retail yards could not obtain replacements except where sales were for military or war plant purposes, so that every foot of lumber a yard sold for FHA houses, remodeling and repairs, was selling that yard out of the lumber business—unless it could scrape up sources of lumber species not restricted and not ordinarily used in construction.

Builders operating under Title VI, possessing priorities for plumbing, heating and electrical goods, know how far they have had to shop to see their jobs through, and they have daily been faced with employees being drafted or going to work in war plants. Even so, some developers have managed fairly well, as is seen by the fact that private builders operating through FHA started 11,378 one-to-four family dwellings during September, which compares with 20,286 units started in September of last year.

More could be said, but let us leave the dark side of the picture for awhile.

Mr. Average Builder must convert himself as far as possible to war essentials and permitted jobs, just as thousands of industries, trades and professions have had to do—just as the building material dealer is trying to do. At first glance, the present limits of L-41 don't seem to offer much. What residential or commercial job can be done with \$200? What multiple residential or agricultural job can be done with \$1,000?

First, there is no limit on repair and maintenance work for "the upkeep of a building, structure or project in sound working condition," and for "restoration without a change of design."

Second, the limits of L-41 may be added to that portion of a job that is purely repairs and maintenance. For illustration, a house (not necessarily in a defense area) has a leaky roof, the siding is in bad shape, the



• WARTIME MAINTENANCE and Repair of Buildings —

THIS FORM MAY BE REPRODUCED IN SAME SIZE AND FORMAT FORM PD-406 (4-7-42) REDESIGNED (9-2) UNITED STATES OF AMERICA WAR PRODUCTION BOARD		1. THE STRUCTURE FOR WHICH MATERIAL IS REQUIRED IS WITHIN A DEFENSE HOUSING CRITICAL AREA BEING LOCATED AT: STREET _____ CITY OR TOWN _____ COUNTY _____ STATE _____ Copies of the Defense Housing critical list, referred to in this application, may be obtained from any local office of the Federal Housing Administration, War Production Board, field offices, or from banks, building and loan associations, or other home-financing institutions. Information regarding the Defense Housing critical areas may be obtained from any local office of the Federal Housing Administration.	
APPLICATION FOR PREFERENCE RATING ON MATERIAL ENTERING INTO A LOW COST REMODELING PROJECT UNDER PREFERENCE RATING ORDER NO. P-110			
This application must be filed in triplicate with the local office of the Federal Housing Administration having jurisdiction over the locality in which the remodeling project is located.			
THE UNDERSIGNED HEREBY APPLY FOR PRIORITIES ASSISTANCE UNDER PREFERENCE RATING ORDER NO. P-110 FOR THE REMODELING PROJECT DESCRIBED BELOW AND SUBMIT THE FOLLOWING INFORMATION:			
2. THE FOLLOWING ACCURATELY DESCRIBES ALL THE IMPROVEMENTS AND INSTALLATIONS TO BE MADE IN SUCH STRUCTURE: _____ _____ _____			
3. HAS ANY PREVIOUS APPLICATION OF ANY KIND FOR PRIORITIES ASSISTANCE FOR THE REMODELING PROJECT OR ANY PART THEREOF BEEN FILED? <input type="checkbox"/> YES <input type="checkbox"/> NO (Check one) IF SO, NAME FORM AND DATE ON WHICH APPLICATION WAS MADE AND REASON FOR REAPPLYING.			
4. THE IMPROVEMENTS AND INSTALLATIONS DESCRIBED IN (2) ABOVE WILL CREATE HOUSING ACCOMMODATIONS FOR THE FOLLOWING NUMBER OF ADDITIONAL FAMILIES _____ (State number)		OR ROOMING ACCOMMODATIONS IN THE FOLLOWING NUMBER OF ADDITIONAL ROOMERS: _____ (State number)	
5. THE TYPES OF ADDITIONAL HOUSING OR ROOMING ACCOMMODATIONS TO BE CREATED BY THE REMODELING PROJECT ARE: _____ IN ACCORDANCE WITH THE NUMBER OF ROOMS IN EACH SUCH ACCOMMODATION TOGETHER WITH THE TOTAL MATERIAL REQUIRED FOR THE COMPLETION OF EACH ADDITIONAL HOUSING ACCOMMODATION, THE MONTHLY RENT TO BE CHARGED FOR THE COMPLETION OF THE STRUCTURE REMODELED, AND THE MONTHLY RENT TO BE CHARGED FOR THE HOUSING ACCOMMODATION WILL BE OFFERED. THE LISTED COST FOR EACH \$100 TIMES THE NUMBER OF ROOMS IN SUCH ACCOMMODATION AND THE IF THE REMODELING PROJECT IS FOR OWNER-OCCUPANCY, SIBLE FUTURE SALE OR RENTALS, THE SHELTER RENT OF HOUSING ACCOMMODATIONS OFFERED AND UNDER P ACCOMMODATION NOR SHALL			
ADDIT _____			

THE PD-406 form (reproduced in part at left) when filled out by the builder is the first step in getting a Title I loan when critical material is needed. At the same time application is made to an approved FHA lending institution for a loan with which to do the job. Procedure from this point on is relatively simple.

Big Volume of Title I Loans for Essential Work Reported in First Ten Months of 1942

IN SPITE of the elimination of many loans for what had been typical improvements under the Title I program previous to Pearl Harbor, a total of 370,080 American property owners used FHA during the first ten months of 1942 to finance essential repairs, fuel conservation improvements, and remodeling to house war workers. These loans, made by private lending institutions under the terms of the National Housing Act, aggregated \$135,368,683; the first ten months of 1941 volume under Title I totaled \$238,000,664.

workers, military officers, non-coms, etc., to create single rooms and apartments. In many places such people are paying \$25 to \$30 per month per room, and apartment rentals are high even with OPA rent control. The greatest single opportunity for builders to help the war effort with profit, with a minimum of difficulty, is the creation of living accommodations for war workers in existing structures, which need not be confined to homes but can be other buildings as well. Here are some of the reasons:

The Federal Government is anxious that existing buildings be used wherever possible, rather than build new.

The procedure for obtaining authorizations is prompt and free from the red tape and headaches of new house construction.

Priorities are given to the extent of \$100 per room or \$800 per structure, to obtain such metal goods as you may be unable to get without priority assistance. Also, if you cannot get a new radiator, for instance, you could install a used one if you had to.

Credit restrictions are waived; FHA Title I loans are available up to \$5,000 for terms as long as seven years, with no down payment, and many financial institutions are looking for this business.

Neither the builder nor suppliers are projecting themselves or committing themselves over long periods, and they get their money without delays for inspections or other incidents, immediately on completion.

All this is accomplished through filling in one simple Form, PD-406, and filing with the local FHA office. This Form calls for the location, a brief statement of the work to be done, what additional living quarters will be created, the critical materials that cannot be obtained without priority assistance, and the signatures of owner and builder. Processing ordinarily takes about a week.

This is not only a plan, it is working in many places. In New Jersey, 500 new living units were created in the month of September, of which many had been mercantile properties. In a statement, State FHA Director Warren J. Lockwood had this to say concerning conversions from commercial to residential use: "As the small stores became vacated by the hundreds, ugly blights set in, and a serious situation presented itself to municipal authorities. A tour of many of the same neighborhoods today reveals an amazing transformation. Stores that could not be rented except for rummage sales and fly-by-night purposes are now attractive apartments with fronts of brick veneer, shingle or asbestos siding and are productive sources of revenue. . . . It is important for the applicant to bear in mind that existing mortgages are no hindrance to the granting of loans for conversion purposes. The principal requirement is that the income from the renovated property be sufficient to finance the existing mortgage and the new loan."

Many builders are keeping their organizations going on conversions, in areas where other builders are inactive.

Likewise the lumber dealer: In a Southern town there are three dealers—two are hanging by the ropes, the other does a land office business.

What is the answer? It is a selling job.

It needs men adapted to or trained in selling; who can

go out like the applicator's salesman following up leads, calling on Mrs. Jones and coming back in the evening to talk it over with Mr. Jones; who know how to get a profit and sell so-much-a-month instead of the total price (unless the prospect has the cash); who were formerly automobile salesmen or that type; who have had doors slammed in their faces before. You can hire such men—they are looking for jobs. Put an ad in the newspaper.

Fourth, there is insulation, storm sash and other items that fit the fuel-saving program, and there are many specialty jobs. The latest War Production Board report on the relative scarcity of materials listed as "adequate for all present demands" the following:

Fibre asbestos, asphalt, brick, casein, portland cement, ceramics, common clay, hair felt, fibre board, glass, gypsum and products, lead pigments, lime, mill-work, low common grades of soft and hardwoods, all grades of gums, mineral wool, paper board, plywood (unrestricted binder), tile, turpentine, vermiculite, wall-board.

Fifth, there is Form PD-200 for getting authorization for other war essential projects, beyond L-41's limits. Many hundreds of jobs are being done by builders utilizing PD-200. In some cases, work at first thought to be prohibited was permitted because it had to do with the war effort. For illustration, when the Army came into Atlantic City, it forced a family out of their home. They

wanted to remodel a relative's home a few miles up the Shore so both families could live in it. Their PD-406 was accepted because they explained what happened in Atlantic City. If that explanation had been omitted, it would have been rejected.

How about future prospects? He who tries to forecast in these times sticks his neck out, so we'll quote official statements:

On Oct. 2nd, the War Production Board through Stacy May, Director of the Statistics Division, in a telegram to the annual meeting of the American Institute of Steel Construction, estimated that the volume of all building and engineering construction scheduled for the war program in 1943, exclusive of shipbuilding, would drop by more than one-third.

It is true that new cantonments are projected, but the vast facilities of the lumber industry—to mention just one—are working 24 hours a day. WPB takes that and other factors into consideration, and should know what they are talking about.

The builder who, by pushing for remodeling and repairs, can keep his organization intact, should get some relief next year. And what is more important, by keeping his business going he will be all set to take care of the enormous backlog of home-building which all authorities agree will be demanded in the post-war period.

Pushes Conversion under Homes Use Service

NHA program to augment private building conversions for war housing in 55 areas where situation is very critical

LEASE FORMS to be filled out for Homes Use Service. Booklet gives questions and answers to those interested.

IN THE National Housing Agency's program to lease existing structures from owners for conversion into additional dwelling units for war workers, there is an opportunity and patriotic duty for the building industry to do a very vital job. This program, which will utilize part of the \$600,000,000 appropriation under the Lanham Act, is to be carried out by the Homes Use Service being set up in critical areas.

In a statement to *American Builder*, Assistant Administrator Frank Bane of the Homes Use Service points out that the actual work will be done under the usual practices of the building industry. He states:

"The Conversion program of Homes Use Service, National Housing Agency, will be handled in accordance with the general custom existing in the building industry, that is, plans and specifications will generally be prepared on a fee basis, competitive bids will be taken and contracts awarded accordingly, by the Home Owners' Loan Corporation.

"As the purpose of the Conversion program is to provide additional dwelling units for war workers, it is necessary that the work be processed with the least expenditure of time, critical materials, labor and money.

"Builders can co-operate best by furnishing proposals promptly to HOLC and, when awarded contracts, by carrying the work through with the maximum speed consistent with good construction."

The image shows a stack of documents. The top document is a form titled "APPLICATION TO LEASE" from the "UNITED STATES OF AMERICA". It includes fields for "Name of applicant (owner)", "Address (owner)", "Address of property to be leased", and "Description of Property". Below these are sections for "Type of structure", "Number of units", "Estimated cost", and "Estimated rental". There are also checkboxes for "Is the structure in good condition?" and "Is the structure suitable for conversion?". A smaller booklet titled "QUESTIONS & ANSWERS ON THE HOMES USE PROGRAM" is placed over the bottom right of the form. The booklet contains a list of questions and answers regarding the conversion program.

STEEL SASH

How to Repair and Re-use

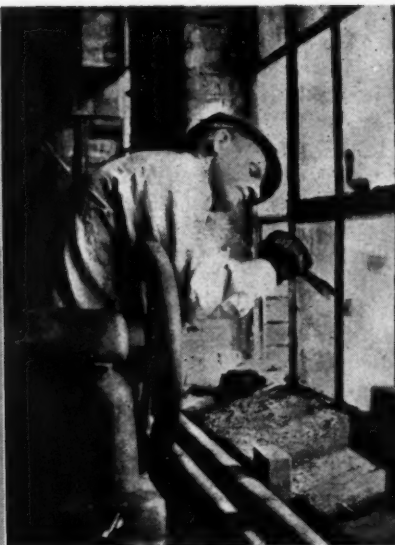
By John B. G. Mesker



TODAY, more than ever, there arises the constant problem of repair, maintenance and re-erecting of steel industrial sash. While in recent peacetime years not much has been said about the salvage value of steel sash, nor its ability to withstand years of abuse, now with every pound of steel on the critical list it has become more and more necessary to use and reuse steel sash already installed in a building.

Many old installations of steel sash are comparatively easy and inexpensive to put into first class condition again. This is especially true where they have been installed in buildings not attacked by extreme corrosive conditions. On the other hand, if the sash, for example, are in a packing house, railroad roundhouse, or other similar type of building, or if they happen to be located close to salt water, the severe corrosive atmosphere in these places may have caused them to rust to a point where they are no longer serviceable. In general, however, say in 90 per cent of the cases, steel sash as old as 25 years can be made serviceable without too great an expense.

Consider a hypothetical case. Here is a building long vacant, that is vital to the war effort. It has steel sash throughout. The owner wants to put it in first class



ACTION PHOTOGRAPHS show steps in rehabilitating rusted and broken steel factory windows.

condition. Here is what to look for on the windows.

Inspect the bottom sill member by trying to push a knife through it at the sill. If it has rusted so far that the knife goes through at many places, then the sill member should be removed. This is perhaps the most expensive repair job to do on a steel window and care should be taken in figuring such a job. If cost is a prime factor a temporary method of keeping the window from leaking at the sill would be to try to plug the cracks or other openings with caulking compound. This, however, is purely a temporary measure and will not last more than a few years.

In replacing the sill, the old sill member must be entirely removed from the window by cutting it away from vertical muntins and jamb members. Either a hack saw, torch or cold chisel can be used, but the hack saw is the best because it leaves a smooth cut to which new sill member can be welded. Cut off all muntins and jamb members level with each other. Sometimes it is desirable to cut them at a point sufficiently above the original masonry sill, to allow room for placing a new sill on top of the old one. Old (but not rusted) sill members, for replacement parts, may be obtained by using the frame members of other sash too old for any purpose but for scrap.

Repair Cost May Be High, But Show Savings

Junk yards and other scrap piles will usually yield a rolled steel section, angular in shape, that can also be used as a replacement sill member. It might even be possible to obtain some steel window sections from local steel jobbers or from manufacturers of steel windows. In removing the sill, of course it is necessary that the lower lights of glass be first removed from the sash. Because of the necessity of removing glass with constant breakage, the cost of reglazing plus the cost of tearing out the old sill member, it can be seen that the total cost of the job will be quite high. However, where the rest of the steel window is in good condition, it is still less expensive than replacing the entire window.

The second thing to look for is the ease of operation of ventilators. Open and close every one. See if they



RUSTED bottom sill member is hack-sawed out, new piece welded in; sash are then reglazed and caulked.

close tightly. Sometimes pivoted type vents will sag at the pivots or in the case of rusted sills, the bottom frame of the vent might have been forced to belly upward, preventing the bottom of the ventilator from closing tightly. Usually there is enough clearance left to allow you to chisel or hack saw away any small portion of metal that interferes with tight closing. Sagging vents are most frequent in the pivoted type. When projected vents sag it is usually due to a broken side arm. If the side arms are broken, a piece of flat or angle steel of proper size can be substituted easily. Side arms are riveted to the frame and vent, and all that is necessary is to remove the rivets and replace them with bolts or other rivets.

In cases of severe rusting, some of the weathering members of the window might have to be replaced. Remember that steel window vents are supposed to make a double contact. One contact is around the outside perimeter and the other is around the inside perimeter. Normally steel sash will not be really weather tight unless they do make contact both inside and out. If weathering members have to be replaced it is a fairly easy matter to do so, as most weathering members are riveted either to the ventilator or the frame. Normally the rivets can be broken. New weathering members made out of commercial steel sections can be reinstalled with either rivets or bolts. If a bolt or rivet head is covered up with putty, as in many cases it will be, it is necessary to scrape out the putty in a small area around the vicinity of the rivet or bolt head.

While looking at the ventilators observe the locking devices. Are the cam locks or spring locks broken? Many steel sash manufacturers will be able to supply you with some kind of cam lock or spring lock that can be made to fit the job. The plate to which the hardware is attached at the bottom of the vent is usually attached by rivets and this also can be easily replaced. Even in this case you will probably find some steel window manufacturer able to supply you with a suitable hardware plate.

Except for rusted bottom sill members, lost or broken hardware and possible sagging of ventilators, the average steel sash will be in good shape. A little graphite grease on the pivot or sliding shoes (in the case of

projected vents) and some oil on the cam locks and spring latches will make ventilators work like new. Of course, like all exposed steel in any building, if the sash are rusted, then observe good repainting procedure. Wire brush all the rust off until the metal beneath is either shiny or firm. Remove all loose scale, then apply a new coat of red lead and oil. Remember, paint goes a long way on steel because
(Continued to page 87)





LOADED with Colonial charm, this little Dutch model was completed recently by Community Builders at West Hartford, Conn.



BUILDER J. M. HOWARD and trouble-shooter Roy Holloway on the job.

4 Clever Colonials—One 21' x 31' Plan

Top Notch War Designs with Post War Possibilities

EVEN in wartime people want *charm* in their homes, and this is just what Community Builders of Hartford, Conn., and Architect Keith Sellers Heine had delivered in the accompanying designs early this year.

Using the simple 21' x 31' floor plan, shown on opposite page, Architect Heine has done a remarkable job of diversification of exterior design—each one a little gem in its own right. Shutters, latticework, picket fences, Colonial



RED SALT-BOX, left, and square Colonial with fan window are alternate designs to use with basic plan at right.



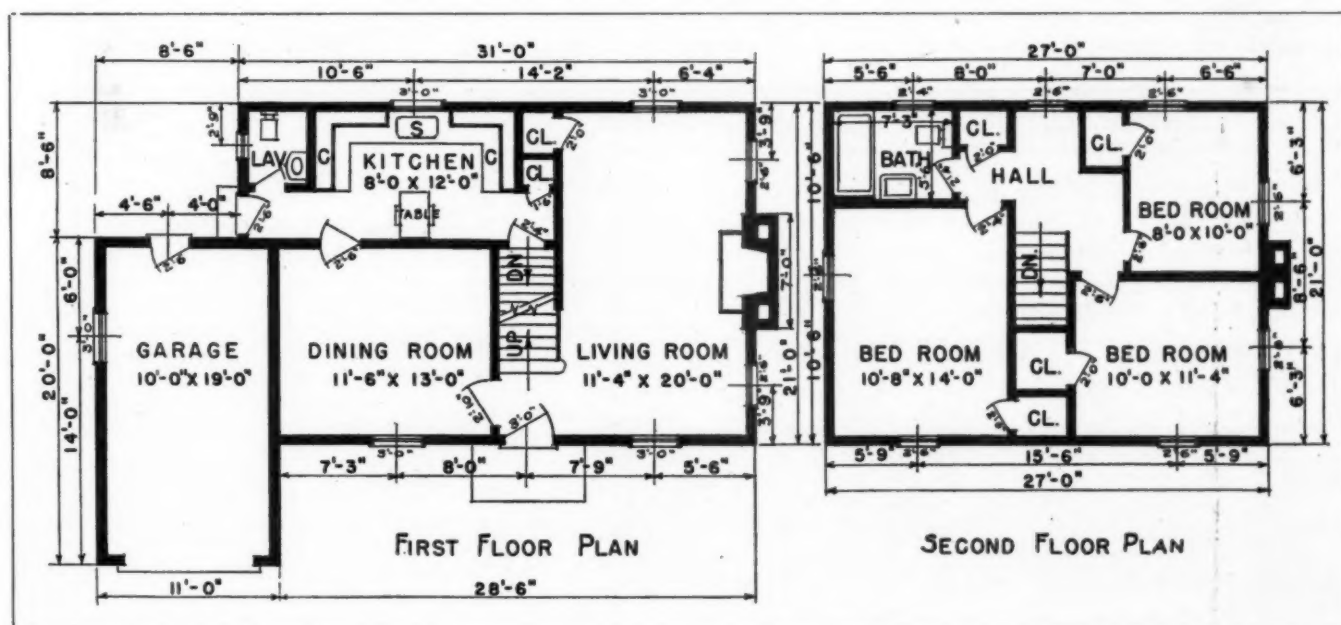
SHUTTERS, lattice entrance, picket fence and weathervane give sales punch to Hamilton Heights home. Keith Sellers Heine, architect.

lamp posts, weather vanes and striking combinations of exterior colors have been skillfully employed.

While in many areas these houses, if built on the same 21' x 31' basement, would cost more than wartime restrictions permit, they are definitely of post war interest. The floor plan with its center hall arrangement, 11'-4" x 20' living room and downstairs lavatory also has

much to recommend it. All of the rooms are well arranged and have large, pleasantly spaced windows.

These are part of the Hamilton Heights project of Community Builders at West Hartford, sponsored by Anthony F. Cersosimo, secretary of the company, who is prominent in many Connecticut building operations. R. J. Howard is the builder.



BASIC FLOOR PLAN only 21' x 31' provides good center-hall arrangement, 11'-4" x 20' living room, lavatory near rear entrance.

SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use coupon on this page for requesting further information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.

NEW TOOLS, MATERIALS AND EQUIPMENT OFFERED

AB962 The Chicago Technical College, 2000 S. Michigan Ave., Chicago, has revised and enlarged its popular "Chicago Tech News" and has named it "Step Up," to suggest the new line of opportunity and service brought about by war industry expansion. Special Learning—Greater Earning is Tech's present slogan. The September issue of the school publication is a 24-page well illustrated magazine featuring college personnel and some of the new war industry training courses now offered.

AB963 Armstrong's De Luxe Monowall for residential and commercial interiors is attractively presented in a new 8-page color brochure entitled, "Low Cost Walls of Lasting Beauty." It tells what Armstrong's De Luxe Monowall is, illustrates ten smart tile designs, shows designs in plain colors, marble and wood, shows some suggested overall decorative schemes, and finally explains exactly how the material is installed.

AB964 A handy reference file of samples of Wall-Tex canvas wall coverings has been prepared by the Columbus Coated Fabrics Corporation, Columbus, Ohio. This file has been prepared for architects and home designers. It describes the actual sample swatches; it shows rooms in full color with complete descriptions; and explains, with reference to Wall-Tex, where to use, how to apply and how to figure it.

AB965 "Protect Production with Fences of Brick and Tile" is a timely data sheet of 8 pages and covers from the Structural Clay Products Institute, Washington, D. C. Detail drawings show

recommended construction for 8" brick walls, 8" structural clay tile walls, combination reinforced brick and tile walls, economy brick wall construction, and reinforced brick masonry walls of 8" and 12".

AB966 "How to Save Fuel Oil" is a timely heat conservation handbook of 28 pages issued by the Petroleum Industry Committee, 624 S. Michigan Ave., Chicago. This booklet presents 52 ways of conserving fuel and heat.

AB967 The General Electric Co., Air Conditioning Dept., Bloomfield, N. J., offers "Tips on Fuel Conservation," a new consumer booklet of 38 pages, pocket size. Fuel-saving facts are presented in three sections; the first concerns heat loss generally, covering weatherstripping, storm sash, insulation, and other means of reducing heat loss. The second section deals with heating equipment and heating systems; and the third section deals with service calls and suggestions on how to avoid unnecessary calls.

AB968 "The FlashingTrim Portfolio" prepared by Penn Supply & Metal Corp., Philadelphia, Pa., contains two interesting 4-page data sheets on roof construction and sidewall construction. Galvanized metal accessories are shown in considerable detail.

AB969 "Fluorescent Lighting Fixtures by Hygrade Sylvania" is a deluxe brochure of 30 pages devoted to industrial plant and office illumination. It

is a catalog designed to simplify the problems of selecting the proper types and quantities of fixtures for each particular lighting project. This book is issued by the Sylvania Electric Products, Inc., Ipswich, Mass.

AB970 Non-metallic insulation items and wiring devices produced by Knox Porcelain Corp., Knoxville, Tenn., are attractively presented in the new 28-page catalog entitled, "Porcelain All the Way." These devices are used for the low-cost knob and tube system of wiring now approved for wartime housing.

AB971 "Vinylite Wire and Cable Insulation Plastics" is a new brochure of 12 pages and covers from the Halowax Products Div. of Union Carbide and Carbon Corp., New York City. This booklet reviews the important advantages derived from the use of Vinylite resin compounds for wire and cable insulation from the standpoints of installation, service, and safety.

AB972 Rubber belting for conveyor belts, transmission belts, etc., is covered in a very practical and helpful way in a new 38-page handbook from The Goodyear Tire & Rubber Co., Akron, Ohio, entitled, "Industrial Rubber Products." This is primarily a conservation manual, concisely written for the plant operator to help him obtain maximum product performance from every industrial mechanical rubber products installation now in use. Included is a handbook of splice and repair work, probably one of the finest manuals on this subject that has ever been written.

AB973 "Armstrong's Insulation for Dairy and Ice Cream Plants" is a new 8-page illustrated data sheet—one of Armstrong's low temperature insulation series; included are "Design Standards for Cold Room Insulation."

AB974 "Cornell Rolling Doors" is an 8-page data sheet from Cornell Iron Works, Inc., Long Island City, N. Y., which presents new information on recent changes in rolling doors, grilles, etc., to substitute wood for critical metals. In addition to the wood rolling doors, vertical lift doors, bi-fold doors and wood canopy doors are included.

AB975 A new 4-page data sheet has been issued by the Armstrong Cork Co., Building Materials Div., Lancaster, Pa., illustrating and describing Temlok De Luxe fibre board and tiles for commercial interiors. Modern decoration, efficient installation, better light and less noise are the four advantages offered for this sidewall and ceiling material.

AB976 "Handbook of Special Steels, Their Properties and Uses" has been prepared by the Allegheny Ludlum Steel Corp., Pittsburgh. It is a spirally bound, pocket sized book of 128 pages. It carries all pertinent information on the various grades of stainless, tool, and other special alloy steels produced by this company.

SERVICE COUPON—CLIP and MAIL to CHICAGO

Readers Service Department,
American Builder,
105 W. Adams St., Chicago, Ill.

(December, 1942)

Please send me additional information on the following product items, or the catalogs, listed in this department:

Numbers

Name

Street

City State

OCCUPATION*

*Please note that occupation must be stated if full service is to be given



In Time of War TIME COUNTS and when Time Counts you can count on **Rō-Way** Overhead Type Doors

"QUICK"
in Action"

"QUIET"
in Operation"

"TOUGH"
in Service"

"TRIM"
in Appearance"



Today Ro-Way Overhead Type Doors
are Serving America in

Naval Depots	Navy Proving Grounds
Air Bases	Munition Factories
Armories	Torpedo Stations
U.S.O. Buildings	Coast Guard Bases
Ordnance Plants	Cantonment Camps
Navy Yards	Submarine Bases
Bomber Plants	Marine Bases
	Army Proving Grounds

"Time" in Installing

Each Ro-Way Door is a complete unit ready to place in the opening. Each requires a minimum of headroom. Complete pictorial instructions are sent with every door.

"Time" in Operating

Individually *Power-metered Springs* insure perfect balance and quick, easy operation. Exclusive Ro-Way *Friction-Reducing Track* gives smooth gliding action. "*Crow's Foot*" *Outer Bearing Support* keeps chain sheave wheel in perfect alignment.

"Time" in Adjusting

"*Zip-Lock*" *Adjustment*, an exclusive feature on Ro-Way Torsion Spring Powered Doors permits instant adjustment of spring tension without removing any glass or panel.

Write for detailed information and prices on
Ro-Way Doors for Industrial and Commercial use.

ROWE MANUFACTURING CO.
759 Holton St. Galesburg, Ill., U. S. A.

*"There's a RoWay
for every Door way!"*

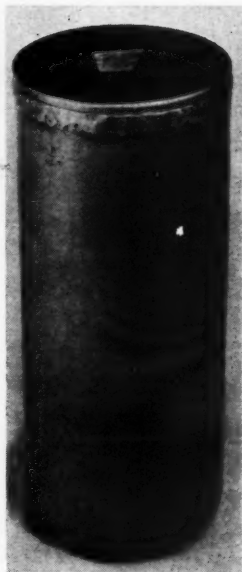
Getting Along with Less of Critical Materials

Lead for Trap Drums

TO PROVIDE a drum trap not subject to severe priority restrictions, the Lead Industries Association, 420 Lexington Ave., New York City, has developed a hard lead cover and ring to take the place of the usual brass cover.

This threaded cover and ring is die-cast of hard lead and the ring is welded to the trap body instead of soldered as was necessary with the brass cover. The opening is large enough to provide access to the trap if necessary for cleaning and the threads, being comparatively coarse, are easily engaged. Also the threads are iron pipe size to allow easy straightening if ring should be damaged by accidental abuse.

This trap, being entirely of lead, offers uniform maximum resistance to corrosion and should receive immediate approval from all local inspection departments.

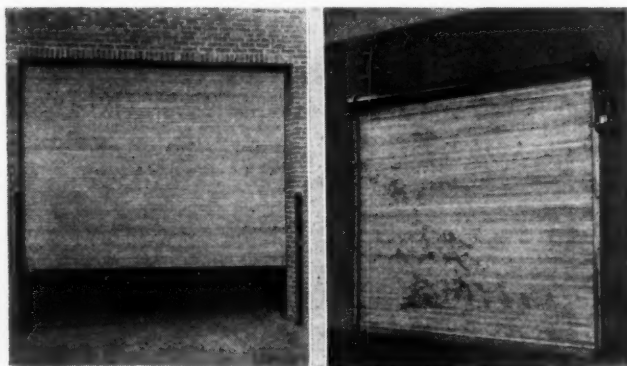


LEAD trap drum.

Wood Rolling Door Offered

THE Kinnear Manufacturing Co., Columbus, Ohio, announces production of an upward-acting, wood rolling door providing a much needed answer for wartime door requirements. By incorporating the same upward-operating principle used for many years in the famous Kinnear steel rolling door, this product is reported to afford many of the same advantages, including overhead storage, space economy, convenience, neat appearance, and long years of service.

The curtain proper is composed of wood slats suitably shaped to permit easy articulation and jointed together by means of metal tapes or cables. It coils overhead upon a barrel, journaled in heavy cast iron brackets mounted at the corners of the opening above the lintel, and travels in heavily constructed wood guides placed at the side of the opening. Bearings are provided at the points where the curtain enters the guides. Helical springs enclosed in the barrel assure perfect counterbalancing. Depending on the size of the door or on the owner's preference, operation can be manual, by chain and reduction gearing, or by motor.



OUTSIDE and inside views of Kinnear wood rolling door.

Wood Stanchions Easily Changed to Steel

THE LOUDEN Machinery Company, Fairfield, Iowa, has designed the "Victory" cow stall, stanchion and pen, an all-wood and concrete arrangement, the main feature of which is its easy convertibility to steel stanchions when steel again becomes more abundant.

With this "Victory" cow stall, it is not necessary to determine what the width of the future stalls will be. By making provision the entire length of the stall row for later installation of steel stall partitions, the farmer can determine the width of his steel stalls at the time he puts them in.

Notice that the space for the stall partitions and the space for the water bowl pipe line have been covered over with a thin filler of mortar, making the entire stall platform smooth and level. When steel stalls and water bowls become more available, it will be a simple matter to crack this filler and insert the water bowl pipe line and stall partitions.

Note also that the entire curb is built of wood. The construction is substantial enough to hold the heaviest breeds of dairy cattle. A decided advantage of the "Victory" Stall is that this wooden curb can be later utilized as the form for a concrete manger when installation of steel equipment is made.

But perhaps the most appealing feature of the "Victory" cow stall is its economical construction. Any farmer who has any knowledge at all of carpentry can build these stalls and stanchions himself. Consequently, he has a minimum investment in substitute cow stalls and stanchions which are to be replaced as soon as Hitler and Hirohito are licked.

Complete, detailed plans can be obtained from Louden dealers at a nominal sum, which will be refunded on the first shipment of stalls and stanchions.



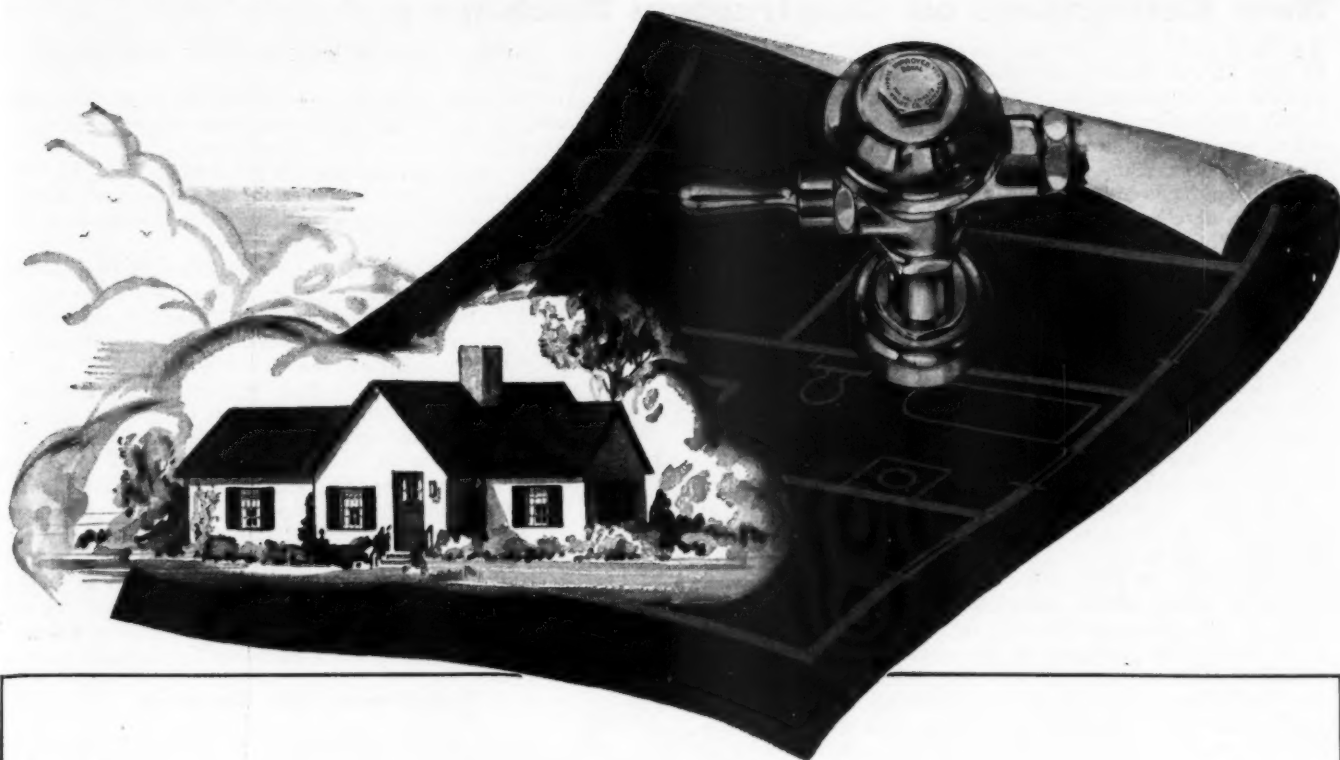
LOUDEN'S new "Victory" wood stanchion.

New Floor Covering for War Plants

CONGOLEUM-NAIRN Inc., Kearny, N. J., has announced its new Nairn Static-Conductive Linoleum. This floor covering has been designed to overcome the grave hazard caused by static electricity in the presence of vapors from combustible substances and dust from explosives or from any substance which combines with oxygen.

Nairn static-conductive linoleum is non-sparking and highly conductive of static, yet provides adequate protection against accidental grounding from service voltages. Produced especially for use on floors and tables in powder and loading plants, it also finds valuable applications in areas where solvent vapors or dust constitute fire hazards and for hospital operating rooms

(Continued to page 73)



START PLANNING NOW FOR SLOAN-EQUIPPED HOMES

Through these dark clouds of War, many of us envision our dream-house of tomorrow, and in it we see many new ideas and innovations—a new way of life itself. Sloan engineers are going to be responsible for some of this change, because even now they say—

"Heretofore Sloan Flush Valves were specified for only luxury homes, large apartments, hotels, hospitals, schools, institutions and other types of large buildings; but here is our promise to you today—

After the War there will be Sloan Flush Valves with all their well-known advantages for even modest homes and inexpensive walk-up apartments."

For 36 years Sloan Flush Valves have proved their trouble-free durability with astonishingly low maintenance cost. They protect health by preventing back-syphonage—They save water—They are quiet—They are the accepted standard-of-excellence by which all other flush valves are judged.

So start planning now for Sloan-equipped homes. With Sloan Flush Valves you provide home owners with the ultimate in convenience, health and economy. Remember: there are more Sloan Flush Valves sold than all other makes combined.

SLOAN VALVE COMPANY

4300 WEST LAKE STREET • CHICAGO

New Restrictions on Construction Machinery

ALL CONSTRUCTION machinery and equipment, effective Nov. 15, was placed under allocations control by the Director General for Operations, with the issuance of Limitation Order L-192. Production of certain types of equipment needed for the armed services was stopped as far as civilian use is concerned. The restricted machinery, as listed in Schedule C of the order, will be manufactured hereafter only for use of the military.

Civilian purchase and use of new construction equipment on Schedule A for private account, after November 15, will be permitted only under an authorization from the Director General for Operations. Order L-192 supersedes Limitation Orders L-82 and L-82-a, restricting production and distribution of power shovels and cranes and rubber-tired construction equipment.

By requiring registration of each unit of equipment of the types listed in Schedule A, when in the hands of private owners, a control is maintained over the location and use of essential machinery. The purpose of registration is to enable prospective buyers or other authorized users to obtain the equipment that has been released or which has become idle.

Regulations previously imposed under L-196 to require registration of used construction equipment and reports of change of status are retained unchanged.

As a condition to the resale, rental and use of such equipment (Schedule A) by private owners, they will be required to file notice 30 days prior to sale, lease or use on any other project. Form WPB-1159 (the same as that required in L-196) is prescribed for that purpose. It must be completed and returned to the Used Construction Machinery Specialist at the Regional office of the War Production Board in the area where the equipment is located. (This requirement does not apply to equipment listed in Schedule B.)

Schedule B contains a list of smaller, less critical units of equipment and machinery such as jack hammers, rock drills, paving breakers, pumps, carts, material handling machinery, etc.

Products in Schedule B are removed from the restrictions that apply to all other types of equipment and machinery, in two important respects: namely (1) the procedure for placing and receiving orders (par. d), and (2) restriction on resale, rental and use, many of which may be classified as "off the shelf" equipment.

Text of Order L-192

§ 1157.10 Limitation Order L-192—(a) *Revocation of Limitation Orders L-82 and L-82-a.* This order, as of a date fifteen (15) days after its issuance, supersedes Limitation Order Nos. L-82 and L-82-a. All releases on equipment granted by the Director General for Operations pursuant to Limitation Order Nos. L-82 and L-82-a which are not shipped by November 15, 1942 shall be deemed cancelled as of that date.

(b) *Applicability of priorities regulations.* This order and all transactions affected thereby are subject to all applicable provisions of the priorities regulations of the War Production Board, as amended from time to time.

(c) *Definitions.* (1) "Person" means any individual, partnership, association, business trust, corporation, government corporation or agency, or any organized group of persons, whether incorporated or not.

(2) "Producer" means any person engaged in the manufacture of equipment as hereafter defined.

(3) "Equipment" means that construction machinery and equipment listed in Schedules A, B and C attached hereto, but shall not include any rubber tired chassis or running gear built for or usable for the transportation of commodities or persons.

(4) "New", when applied to equipment, means any equipment which has never been received or accepted by any person acquiring it for use.

(5) "Repair part" means any part manufactured for use in the repair and maintenance of equipment.

(6) "Lend-Lease government" means the government of any foreign country pursuant to the Act of March 11, 1941, entitled "An Act to Promote the Defense of the United States".

(7) "Essential project" means a construction project undertaken by, or contracted by or for the account of the Army, Navy, Maritime Commission, War Shipping Administration or Defense Plant Corporation, or any other construction project granted a preference rating of A-1-k or higher under any Order in the P-19 series.

(8) "Rubber" means all kinds of natural, reclaimed and synthetic rubber.

(9) "Government corporation" means any corporation which is beneficially owned by the United States Government or any of its agencies.

(d) *Procedure for placing and receiving orders.* (1) Any person desiring to place an order for new equipment listed in Schedule A attached hereto shall apply for authorization to purchase as follows:

(i) Such persons, except the Army, Navy, Maritime Commission, War Shipping Administration or a Lend-Lease government, shall file an application on Form PD-556 in quadruplicate with the War Production Board Regional Office in the region in which such person desires to use such equipment. Such application when approved by the Director General for Operations shall establish all conditions under which such order may be placed with the supplier including the assignment of preference ratings if not previously granted.

(ii) No person, except the Army, Navy, Maritime Commission, War Shipping Administration or Lend-Lease government, may file application on Form PD-556 for any items listed in Schedule A which appear in Schedule C hereof.

(iii) The Army, Navy, Maritime Commission, War Shipping Administration or Lend-Lease government shall furnish the Construction Machinery Branch, War Production Board, Washington, D. C., with Form PD-556 made out in quadruplicate.

Few Buyers Are Excepted

(2) No person shall accept an order for such equipment, except from the Army, Navy, Maritime Commission, War Shipping Administration and Lend-Lease government, unless accompanied by such authorization.

(e) *Restrictions on production of equipment.* (1) On and after November 15, 1942, no producer shall produce any equipment except in accordance with such production schedules as may be approved by the Director General for Operations as provided in paragraph (g) hereof.

(2) On and after November 15, 1942 no producer shall produce any equipment designed for or requiring rubber tires unless the authorization on Form PD-556 required by paragraph (d) specifically so provides.

(3) No producer shall manufacture more parts for assembly into new equipment than required by approved production schedules.

(4) On and after November 15, 1942, no producer shall put into process or assemble any materials in the manufacture of any equipment listed in Schedule C, except to fill an order placed by the Army, Navy, Maritime Commission or War Shipping Administration, or for the use by a prime contractor on a construction project for any of the foregoing, and then only if authorized by the Director General for Operations on Form PD-556.

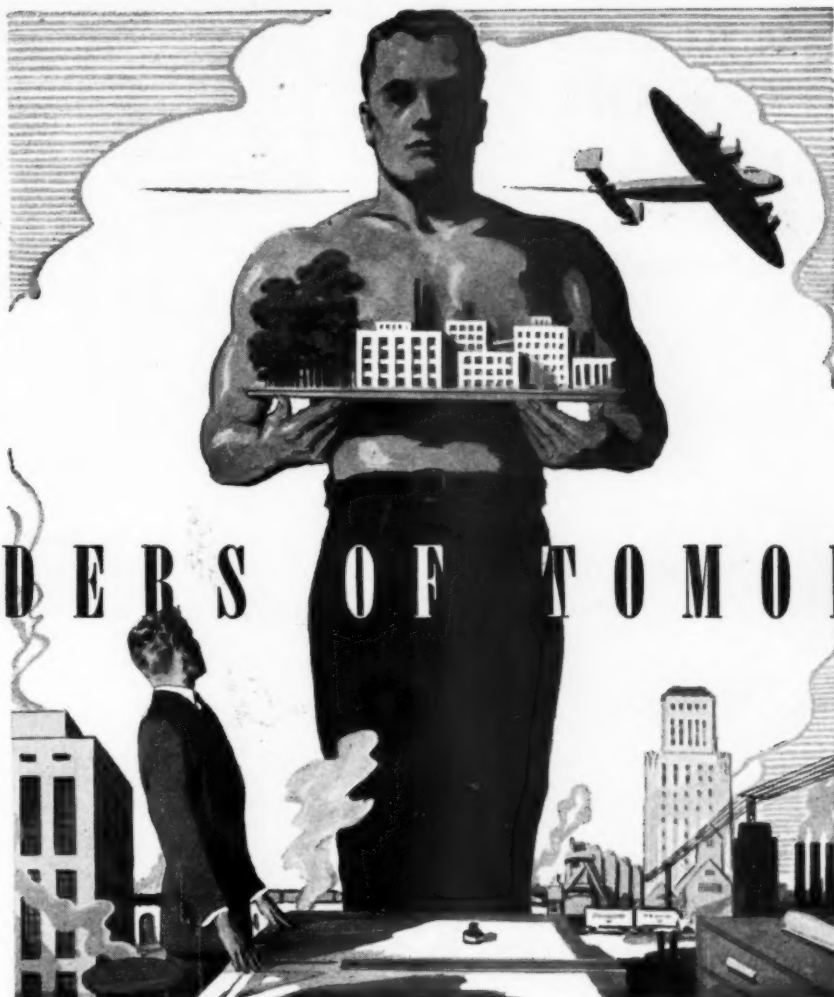
(f) *Production schedules.* On or before November 15, 1942 and on or before the 15th day of each succeeding calendar month, every producer shall file in triplicate on Form PD-697 proposed production schedule of new equipment projected for such period as production may be planned. Except as limited in paragraph (e) (2) hereof, the production schedules of all new equipment for the three calendar months succeeding such filing or for such shorter time as production scheduling may be planned shall be deemed to be approved as of the first of the calendar month following receipt of such Form PD-697 by the War Production Board, unless the Director General for Operations shall otherwise direct. No producer shall change his production schedule as approved or changed by the Director General for Operations without specific authorization of the Director General for Operations.

(g) *Inventory reports.* Producers shall, on the 15th day of each month, file in triplicate on Form PD-697 a statement of finished unsold inventory, as of the last day of the preceding calendar month, of new equipment including that in the possession of their dealers and distributors. Dealers and distributors, on the fifth day of each month, shall report their inventories of new equipment as of the last day of the preceding calendar month to the producer from whom such equipment was purchased or, if not purchased, to the producer for whom the distributor or

(Continued to page 80)

...TO
YOU

BUILDERS OF TOMORROW



With all the world locked desperately in War, today may seem an odd time to speak of Tomorrow. But tomorrows always come. And while we now devote ourselves almost exclusively to the productions of *War*, we know that today the exciting new world of the Future is taking shape. . . .

Exciting? Yes!—a world not only of amazing automobiles and family airplanes, but also of better living. . . . Economical houses built in mass production to serve mankind as no house has ever served before. Homes, offices, factories of such comfort and convenience as we have never known.

For this new world, we of The Mengel Company will offer many contributions. Our famed Mengelbord and other Plywoods, now being used in ships and war

boats and airplanes as well as in famous housing projects will undoubtedly become a staple material. Our Mengel Grid-Core Flush Doors, now being used in many War Housing jobs, may easily grow tomorrow into entire wall-sections. Our vast factories now engaged almost exclusively in War work will unquestionably help to fashion the New World's finer, better houses.

Feeling thus the enormity of tomorrow's opportunity and challenge, we of The Mengel Company know that we see eye-to-eye with all you builders and planners who are now, perhaps subconsciously, designing Tomorrow. And when this War ends, you can count on every facility of production and distribution available from Mengel—America's Largest Producer of Hardwood Products.

THE MENGEL COMPANY

INCORPORATED

LOUISVILLE, KENTUCKY



Mengel Flush Doors are fine hollow grid doors, resin-bonded in hot-plate presses and sealed against both dirt and moisture. All wood parts are *genuine hardwood*. Faces of Gum, Mahogany, Walnut, Birch and Oak.



Mengel Furniture is mass-produced to the specifications of several of America's greatest furniture merchandisers, which makes us one of the largest producers of special-order furniture suites in the world.

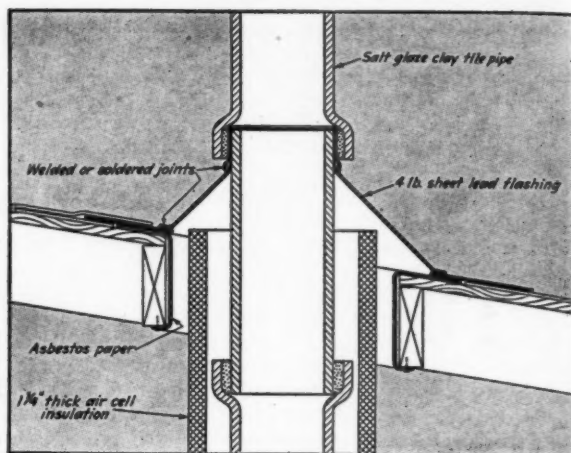
Mengelbord is *genuine hardwood plywood*, $\frac{1}{4}$ " thick, in big 4' x 8' sheets. Resin-bonded in hot-plate presses. Faces of Gum, Mahogany, Walnut, Birch and Oak.



PRACTICAL JOB POINTERS AND BUILDING DATA

Tile Flue Detail Calls for Lead Flashing

THE use of bell and spigot clay pipe for flues in houses of demountable construction has been approved by the Federal Public Housing Authority. The installation must be firesafe, and weathertight flashings must be provided. A detail has been issued showing construction and insulation as well as the flashing which is of 4-lb. sheet lead.



DETAIL of tile flue construction showing lead flashing.

The flues are of 6, 7 or 8-in. inside diameter as required by combustion conditions of the fuel to be used. The flashing is of conical shape and is to be extended up around the stack to where it turns over the end of the pipe. A final joint of the pipe with the bell inverted completes the flue and makes a thoroughly water-tight joint. The base of the flashing cone is welded or soldered to a sheet lead flange which extends out under the roofing material in the usual manner.

Because of the conical construction, which is to provide insulating air space, this flashing must be made from sheet but it can be quickly cut out from easily drafted patterns adjusted to the slope of the roof.

The air cell insulation and asbestos paper shown in the detail are to provide additional fire safety in case the flue is kept hot over a long period of time.

Lead is particularly adaptable to the flashing of a vitreous material. It is flexible and can be easily adapted to the unavoidable irregularities of the pipe. It can be dressed smoothly over the end of the pipe to receive the inverted bell. Also the flexibility of a lead flashing makes it easy to adapt to any slight irregularities in roof slope. Lead is highly resistant to atmospheric corrosion, including the effects of flue gases which makes it highly desirable for this use.

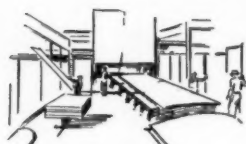
Fortunately, lead is available in sufficient quantities to justify its use for flashing requirements for which it is generally approved by the Defense Housing Critical List.

Lead Substitutes for Copper, Tin, Zinc

EVER since the Bureau of Industrial Conservation of the War Production Board several months ago placed lead in the group of materials available in sufficient quantity to be used as a substitute for more critical materials, the WPB, Army and Navy officials, as well as industry have been searching diligently for uses of lead that would relieve more critical materials. Lead, incidentally, is the only common metal classified in the least critical group. Already considerable progress has been made and more will undoubtedly result as the country becomes more fully aware of the current availability of lead.



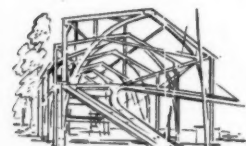
...with **WOOD and LAUCKS GLUE!**



ENDLESS LENGTHS OF PLYWOOD — WITH LAUCKS CONSTRUCTION GLUES



LAUCKS GLUE FOR PREFABRICATED WARTIME HOUSING



LAUCKS GLUE LAMINATED ARCHES FOR ARMY CHAPEL

VIRTUALLY "packaged" were these six 71-foot beams in the Bremerton Recreation Center at the Navy Yard City. Laminated in Seattle, across Puget Sound, the beams were laid-down on the job — complete — ready for erection.

Wood, Laucks Glues and Resins are doing thousands of jobs better, faster, more economically — and are saving tons of vital steel for other wartime uses.

Investigate how Laucks Construction Glues can save time, money, critical materials on your jobs in arches and beams, in prefabricated and all types of dry-built construction with plywood, wallboard; in farm structures, etc.

For information, write Laucks, where 20 years laboratory research and practical experience guarantee the right use of the right glue.

I. F. LAUCKS, Inc. Lauxite Resins — Lauxein Glues

In U. S. Address Inquiries to —
SEATTLE—911 Western Ave. CHICAGO—6 N. Michigan Ave.
LOS ANGELES—859 E. 60th St.

Factories: Seattle, Los Angeles, Portsmouth, Va., Lockport, N.Y.

In Canada Address Inquiries to —
I. F. LAUCKS, LTD., Granville Island, VANCOUVER, B.C.
HERCULES-LAUX-MERRITT, LTD., STANBRIDGE, QUEBEC

★ Don't forget, LAUX REZ, the pioneer resin sealer and primer, protects wood as rust-proofing protects metal.



LAUCKS CONSTRUCTION GLUES
Consult LAUCKS—America's Glue Headquarters

The use of lead to save critical materials falls naturally into two categories. First, there are many purposes for which lead is normally used to a greater or lesser extent in competition with other materials now critical, for example, lead in plumbing. The more extensive use of lead now as service, soil, waste and vent pipe, flashings and shower pans saves copper, brass, zinc, iron and steel. In this class also falls the greater use of lead for sheet metal work on buildings, such as flashings and gravel stops. Lead-base bearing alloys are rapidly supplanting tin-base alloys in ship construction, diesel engines and many other places. Lead-base die-casting alloys are supplanting zinc-base alloys for many purposes when high strength is not important but where good casting qualities are. The lead-base alloys, in addition, are generally superior for corrosion resistance.

Lead pipe and tank linings are taking the place of rubber in many industrial operations because of lead's corrosion resistance. Lead gaskets are, in many instances, proving superior to rubber gaskets used for a multitude of purposes. Lead collapsible tubes have largely displaced those made of tin and aluminum, and lead foil laminated wrappings are finding wide use to take the place of packages made of more critical materials. Lead coatings are saving much zinc, tin, cadmium and nickel, formerly used to protect iron and steel products.

In the paint field, considerable savings of critical materials are also possible through wider use of lead pigments. For metal priming, red lead and blue lead can conserve zinc and chromium. For finish coats on metal and for wood painting, pure white lead paint eliminates the need for using zinc.

In addition to the class of replacements just described, some are entirely, or almost entirely, new. Lead alloy name-plates, hard lead drum trap covers and rings, and water closet floor flanges have been developed to take the place of brass. Lead alloy couplings are being employed in place of copper and bronze on certain types of cement-asbestos pipe.

It is possible here to mention only a little of what is being done with lead to help relieve critical shortages of other materials, but this brief summary may help to suggest to others how they can use lead to aid the war effort. It is the duty of every industry, trade and government agency to employ the least critical materials that will do their jobs properly. If any one believes that he can use lead at the present time to save some of the highly critical materials, the Lead Industries Association, 420 Lexington Avenue, New York, N.Y., will be glad to assist with information about the properties and uses of lead.

SOME LEAD USES TO SAVE CRITICAL MATERIALS

USE	MATERIAL SAVED	RECOMMENDED
Bearing Metal	Tin-Base	Lead Base
Chemical Tank Linings, and Pipes	Rubber	Lead
Water Closet Floor Flanges	Brass	Lead Alloy
Drum Trap Covers and Rings	Brass	Lead Alloy
Fire Extinguishers	Copper	Lead-Coated Steel
Metallic Coatings	Zinc, Cadmium, Chromium, Nickel	Lead Coating
Paint, White & Tinted	Zinc Oxide	White Lead
Paint, Metal Protective	Zinc Chromate	Red Lead
		Blue Lead
Plumbing Pipes and Fittings	Copper, Brass, Galvanized Iron and Steel, Cast Iron	Lead
Roofing, Flashing, Gravel Stops	Copper, Galvanized Iron, Terne Plate	Lead Alloy
Water Service Pipe	Copper, Brass, Galvanized Iron and Steel, Cast Iron	Lead

New, Washable Water Paint

THE DU PONT Company now offers "Speed-Easy" Wall Finish, an oil-type flat wall paint that thins with water. It is especially designed for application over wallpaper, also painted or unpainted plaster, brick, cement, concrete and building tile.

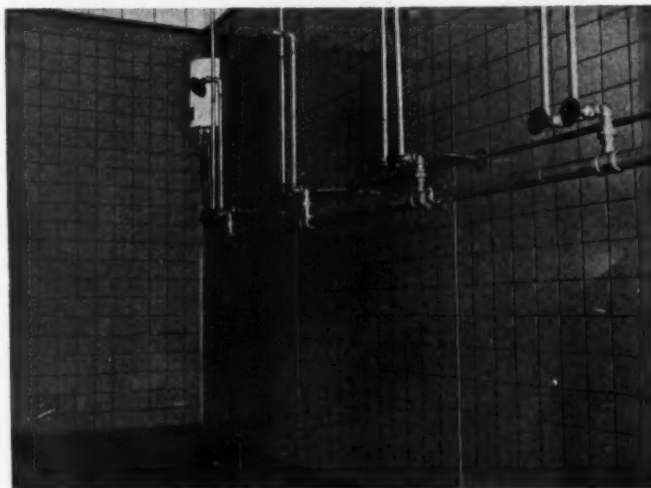
"Speed-Easy" Wall Finish differs from the so-called water paints in that it has a resin and oil emulsion base, unlike calcimine, casein or casein-lithopone finishes. The water evaporates in about an hour's time after application, leaving a durable and washable oil-type flat finish. A gallon of the paste makes one and one-half gallons of inexpensive ready-to-apply finish.

Among the qualities of "Speed-Easy" are its washability, its lack of objectionable odor and its 60-minute drying time. Its economy factor is high since only water is used as a thinner. One coat is usually sufficient to cover properly. No primer, sealer or undercoat need be applied except over new wood or unpainted plaster. "Speed-Easy" comes in eight standard colors. The high-light reflective power of the new finish is also stressed.



For War Jobs

THAT NEED SPECIAL PANELING
OR FINISHES...



Shower stalls in camps, hospitals, air bases, where Barclay Panels stand the gaff.

call in BARCLAY!

★ Right now, Barclay's wide experience is being applied to filling specialized needs of war construction. Barclay Panels are being used in shower stalls, operating rooms, kitchens and corridors of Service hospitals, in the barracks, dormitories and canteens of Army camps and Navy quarters.

SPECIAL BARCLAY FINISHES, formulated "to order" are surfacing the tops of laboratory and surgical installations, tables, desks and counters for various uses throughout the Services.

Barclay has the "know how," the facilities, to meet and beat your toughest war-time specifications. Call us in, there's no obligation.



Barclay Mfg. Co., Inc.
Dept. AB-12, Bronx, N. Y.

Please send me free samples of
Barclay Panels and literature.

Name.....

Address.....

City..... State.....

For the Essential Building of Today



...and the Better Structures of Tomorrow

TODAY, all the Knapp Products flowing from our regular production lines are used necessarily for construction that is urgent and vital to the war effort. The advantages they make possible have been important to emergency building. Furthermore, we, like thousands of others in industry, are also producing countless bits and pieces . . . which become part of the tools and supplies of warfare. We shall continue this "extra" production with our most strenuous effort—as long as it is needed.

TOMORROW, in the construction era after victory, Knapp Products will again be available to help build better structures—for a greater America.

KNAPP METAL TRIM
KNAPP BROS. MANUFACTURING CO.
GENERAL OFFICES • JOLIET, ILLINOIS



PUBLISHER and editors discuss new *American Builder* editorial program geared to war needs and post-war expansion. Left to right, seated: B. L. Johnson, Samuel O. Dunn, Joseph B. Mason. Standing: Paul Watson, Robert E. Sangster.

Mason Appointed Editor of *American Builder*

B. L. Johnson to open Pacific Coast office as part of editorial staff expansion. Vigorous war and post-war program launched.

APPOINTMENT of Joseph B. Mason as editor, opening of a new Pacific Coast office, and inauguration of a vigorous new war and post-war editorial program were announced early in November by Samuel O. Dunn, chairman of Simmons-Boardman Publishing Corp., publisher of *American Builder*.

"The building industry is faced with fast-moving, far-reaching changes and a vast post-war market," said Mr. Dunn in announcing the changes.

"We are expanding the *American Builder* staff and launching a vigorous, forward-looking editorial program geared to wartime needs, and to give the industry the constructive post-war leadership that will be required."

Mason will be transferred to Chicago editorial headquarters from New York, where he has served as eastern editor for the past ten years. Bernard L. Johnson, editor for 35 years, will open a new Pacific Coast editorial office in Seattle, Wash. Robert E. Sangster, managing editor, will assume new responsibilities under the revised set-up, and a new associate editor, Paul W. Watson, formerly of *American Lumbermen*, is added to the staff. Dola Parr continues as associate editor.

Editorial Program Looks Ahead

American Builder's new program is planned to help building men meet immediate wartime problems and, in addition, prepare them to take part in the great post-war expansion this industry will undergo. Prefabrication, post-war planning, new developments in materials and equipment that will change building practice, will be featured. The January issue devoted to "Building Tomorrow" will introduce this program.

Opening of a Pacific Coast office, with Bernard L. Johnson in charge as western editor, is a significant part of the expansion program. His broad acquaintance and long experience in the industry will enable him to furnish editorial leadership for this expanding area, where increases in home building and commercial construction are anticipated in the post-war period.

Because the war has greatly expanded the western output of power, lumber, plywood, plastics, aluminum, steel and other products, important post-war opportunities in development and merchandising are seen.

American Builder's new editor, Joseph B. Mason, who is 39 years old, joined the staff of *American Builder* in 1930 with the purchase of *Building Age*, of which he was then editor. A graduate of the University of Wisconsin, he acquired practical experience in carpentry and engineering in his early years, later engaged in newspaper work and the writing of technical magazine articles, and joined the staff of *Building Age* in 1928.

Robert E. Sangster, 35, managing editor, joined the staff of *American Builder* in 1935. Following work in heating engineering and in architecture, for which he prepared at the University of Michigan, he was engaged in advertising layout, typography and editorial work in the building field.

Paul W. Watson, 36, new member of the *American Builder* staff, majored in journalism at the University of Illinois, began work on the editorial staff of a daily newspaper. His experience includes editorship of a weekly newspaper, managing editor of a business magazine, and work in the building field as a merchandising editor.

* * *

Death of C. R. W. Edgcumbe

C HARLES R. W. EDGCUMBE, veteran member of the *American Builder* staff, died on Nov. 3 in Chicago following a prolonged illness. He was 62 years old.

Mr. Edgcumbe joined the *American Builder* advertising staff in April, 1905, and represented the publication in the sale of advertising space until 1931, when he transferred to the subscription field staff, carrying on very successfully until his retirement on pension in the spring of 1941. His work among advertisers was best known in the Chicago and Wisconsin territory. His circulation work centered in the South, including Texas and the Gulf states through to the Atlantic Seaboard.

His work was always characterized by enthusiasm and the spirit of friendly service. He leaves a host of friends among manufacturers, advertising men and retail lumber dealers.

* * *

Army Is Training Carpenters

C AMP LEE, VA.—Readying for the great offensive that will sweep the axis off the map, the big new U. S. Army mounts in numbers—and in soldiers trained to special trades. For the modern army needs all kinds of experts to fulfill the many jobs that keep it going. In Camp Lee's Quartermaster Replacement Training Center Technical Schools, this growth of men and expertly trained personnel is particularly evident.

The Carpenters School is an excellent example of this training in an important war-time trade. One of the many Supply Training Schools under the Command of General Rowe and the direct supervision of Col. J. V. Rowan, is under the immediate school supervision of Mr. Milton Shufelt, Civilian Instructor, and M/Sgt. N. C. Reinke. Assisting them is a detail composed of three staff sergeants, two sergeants, one corporal, and two privates first class, all chosen for their skill in carpentry and their ability to instruct new soldiers.

Mr. Shufelt, who came originally from Boston, was most recently employed by J. Slotnik Co., of Boston, in Richmond, Va. M/Sgt. Reinke was a contractor with his father in South Bend, Ind. S/Sgt. Joseph Frank was with the Equipment Mfg. Co., Chicago, Ill. S/Sgt. Herbert Stevens was in the contracting field with his brother in Mansfield, Ohio, and S/Sgt. David Arons was in contracting at Cleveland, Ohio.

At Camp Lee's Carpenters School the trainee learns to build anything and to work with a minimum of close supervision. With a minimum of time spent in lectures and explanation at the beginning of a class period, the students quickly turn to actual work, and practical projects in a planned program that crowds a wide technical training into a brief period.

The course of instruction includes preparation for just about any situation that a carpenter may be called on to face in the field. Use and care of hand and power tools; blueprint reading; concrete-pouring; foundation layout; framing light frame structures; interior and millwork; scaffolding and safety; glass and glazing; box and crate construction; cabinet construction and wood surfacing (and repair work); material estimating. Along with the special classes devoted to individual subjects, most of the training period is given to general carpentry.

(Continued to page 74)



WHEELER OSGOOD DOORS

Modernize a Home!

TODAY, more than ever before—remodeling work is vital for steady day-after-day business. With many home owners who had planned to build but are remodeling instead, genuine Wheeler Osgood "Color-Graded" doors offer you a real opportunity to obtain a larger share of this business.

There is a Wheeler Osgood "Color-Graded" door for your every need—for exterior or interior use. These fir doors are made from one of the World's finest woods for door manufacture. Uniform, super-strong and beautiful, fir is rot-proofed by nature.

Don't forget—when you are ordering doors for remodeling or for war housing, Wheeler Osgood is ready to serve you!

Color Graded! Wheeler Osgood's sensational new "Color-Grading" system shows at a glance the grade, style, size and surface of every door! Here's a big help to you in speeding up the handling of your remodeling and war housing orders!

WHEELER OSGOOD "COLOR-GRADED" GRADE A AND B Douglas Fir doors are built in strict accordance with Department of Commerce Standards CS73-38, CS91-41.

WHEELER OSGOOD DOORS



A COMPLETE LINE OF INTERIOR AND EXTERIOR DOORS

FREE Wheeler Osgood Sales Corp., Dept. 13, Tacoma, Wash.

Gentlemen: Please send me free literature on Wheeler Osgood "Color-Graded" Doors.

Name.....

Address.....

City..... State.....

KEEP 'EM POURING

use

SOLVAY CALCIUM
CHLORIDE

IN THIS WINTER'S CONCRETE

*Get Extra Safety,
Extra Speed,
Extra Quality!*

War-time winter concreting operations call for speed—but not at the sacrifice of quality or safety! To obtain extra speed . . . and at the same time, added protection, added safety and added quality, use Solvay Calcium Chloride.

Saves on Finishing, Forms, Protection Costs and Labor. Does not Change Normal Chemical Action of Portland Cements!

use **SOLVAY** CALCIUM
CHLORIDE
with all PORTLAND CEMENTS

SOLVAY SALES CORPORATION
40 Rector Street New York, N. Y.

NEWS of the MONTH

Fritz Burns Elected President of National Association of Home Builders

AT THE 35th annual meeting of the National Association of Real Estate Boards in St. Louis Nov. 16-20, Cyrus Crane Willmore of that city was elected president to succeed David B. Simpson. At this war conference, Fritz Burns, Los Angeles builder, was chosen president of the important home builders' division. Also in the National Association of Home Builders, Joseph E. Merrion, Chicago, was elected first vice president.

One of the most important building industry matters accomplished at the meeting was the raising of \$20,000 to finance the continuance of the Home Builders' Emergency Committee's activities in Washington.



ABOVE: George F. Nixon, Chicago, past vice president of NAHB, addressing realtor-builders at St. Louis NAREB Convention Nov. 18.

Trailers Increased to 30,000

NUMBER of trailers used as stop-gap shelter in the war housing program is being increased to approximately 30,000. Herbert Emmerich, commissioner of the Federal Public Housing Authority, National Housing Agency, has announced that applications have been filed with the War Production Board for 5,000 trailers in November and 2,500 each in December and January. With 30,000 trailers available, it is believed the majority of such emergencies can be met by moving the trailers from place to place.

Walter J. Wood Promoted by Bruce

APPOINTMENT of Walter J. Wood as general sales manager of E. L. Bruce Co., Memphis, Tennessee, has been announced by R. G. Bruce, president of the company. Mr. Wood has been serving for several years as sales manager of the Flooring Division of Bruce.

Mr. Wood, who is widely known throughout the building industry, brings to his new position a background of thirty years in the lumber business. From 1912 to 1924 he was employed in the retail lumber business in Kansas City, Mo. In 1924 he started with Bruce, working as a salesman out of Kansas City. In 1925 he went to Chicago to open a branch office and remained there as district sales manager for five years. He then spent one year in Bruce's Washington, D.C., office and five years in their New York office before coming to Memphis to take over the position of sales manager of the Flooring Division of Bruce which he held at the time of his promotion.

Savings League Examines Government Infiltration in Housing Field

EVIDENCE that public housing officials are using the war housing program as a vehicle to broaden the scope of social housing was one of the major considerations taken under discussion during the annual meeting of the United States Sav-

ings and Loan League, held Nov. 16, 17, and 18 in Chicago. "Federal Government does not belong permanently in the housing business except in very rare cases," Representative Fritz G. Lanham, author of the Lanham Act providing war housing funds, told the convention.

"We can't find anything in the constitution that says the government should build houses for people. The government operates any business it undertakes much more expensively than any private enterprise. No man can feel like a real American in a home which is kept up in whole or in part by his fellow men.

"We want to build up men, the only factor which makes a nation great, and we can't build them up on any policy of pampering those who wish to take the taxpayers' money. The American Bill of Rights was emphatic in its attention to the American Home in keeping it free from interference, Government or otherwise."

Ralph H. Cake, Portland, Oregon, president of the Equitable Savings and Loan Association, was elected fiftieth president of the League.

Other officers elected to serve with President Cake in the wartime administration of the national savings and loan organization are John F. Scott, St. Paul, president, Minnesota Federal Savings and Loan Association, vice president; W. Megrue Brock, Dayton, Ohio, president, Gem City Building and Loan Association, second vice president; and Herman F. Cellarius, Cincinnati, re-elected secretary-treasurer for the forty-sixth time.



RALPH H. CAKE

CMP Pamphlets Available

COPIES of an official pamphlet outlining the new Controlled Materials Plan which affects the flow of steel, copper and aluminum, are now available at WPB field offices. The comprehensive nature of the CMP makes it necessary that every government agency, plant, contractor and individual, concerned with it, fully understand it. The WPB is now organizing an educational campaign designed to explain every phase of the operational procedure.

Salvage Section Moves Scrap Iron and Steel

SINCE March, 1,800,000 tons of iron and steel scrap, mostly without financial assistance, has been arranged for by the Conservation Division's Special Project Salvage Section. An increase in the amount of scrap iron and steel to be obtained from structures where the cost of demolition exceeds the value of the metals was assured by the arrangement of a working relationship between the Salvage Section and War Materials, Inc., newly organized at the instance of the Metals Reserve Co., a subsidiary of the Reconstruction Finance Corp. The Special Projects Salvage Section was established to expedite movement of scrap from large structures where salvage is impeded by legal, financial, and other obstacles. War Materials, Inc., will engage and pay contractors to demolish the structures.

Heat Loss Through Wet Walls

HEAT FLOW through wet building walls is to be investigated in the domestic heating laboratory of the Oregon State College at Corvallis, Ore., by means of a specially constructed apparatus in a study jointly planned by Prof. Earl C. Willey of the College and the research committee of the Oregon chapter of the American Society of Heating & Ventilating Engineers. Various types of building wall sections will be constructed and tested under conditions simulating heat loss during rainy weather.

"The results of the investigation," said Edwin W. Neubauer of Portland, Ore., chairman of the committee, "should be of particular interest for application in the Pacific Northwest in which building walls are wet during much of each winter season."

AMERICA'S FLOORING SENSATION!

DURING 1942, MORE BRUCE STREAMLINE FLOORING WAS USED THAN ANY OTHER BRAND OF HARDWOOD FLOORING

And Here's Why:

- 1 Streamline Flooring is factory-finished! No sanding or finishing on the job. Ready for use the instant it's laid.
- 2 Costs no more, usually less, than ordinary flooring finished after it's laid. Nationally-advertised! A product of the world's largest maker of hardwood flooring.
- 3 Has a penetrating seal finish that seals the pores of the wood. Resists scratching and marring—easy to keep clean.
- 4 Streamline Flooring is being used on war housing projects from coast to coast. Also ideal for remodeling or repair.



For complete details, write
E. L. BRUCE CO., Memphis, Tennessee



Pre-testing the waterproofness of a Navy PT-boat

• Here are the reasons for the soaking, boiling, baking and other stringent tests to which representative samples of the entire Exterior-type Douglas Fir Plywood production are constantly subjected:

- (1) They prove *far in advance of actual use* . . . whether in ripsnorting Navy PT-boats, soldiers' hutments or prefabricated houses for war industry workers . . . that this miracle wood will stand up under *all* water and weather conditions.
- (2) These tests show possible ways of improving the performance of Exterior Plywood.

And (3)—they form an important part of the Douglas Fir Plywood Association's all-over research program . . . a program designed to make the post-war Douglas Fir Plywood more useful to you than ever before.

So keep Douglas Fir Plywood in mind—even though you may not be able to buy it now. Douglas Fir Plywood Assn., Tacoma, Wash.

TO HELP SPEED VICTORY

the Douglas Fir Plywood Industry is devoting its entire capacity to war production. We know this program has your approval.



REMEMBER—there's a grade or type of Douglas Fir Plywood for every purpose. A genuine panel bears one of these "grade trade-marks":

EXT-DFFA—waterproof type
PLYWALL—wallboard grade
PLYSKORD—sheathing grade
PLYPANEL—cabinet grade
PLYFORM—concrete form grade

DOUGLAS FIR PLYWOOD
Real Lumber
**MADE LARGER, LIGHTER
SPLIT-PROOF
STRONGER**

"A product of America's eternally replenishing forests"



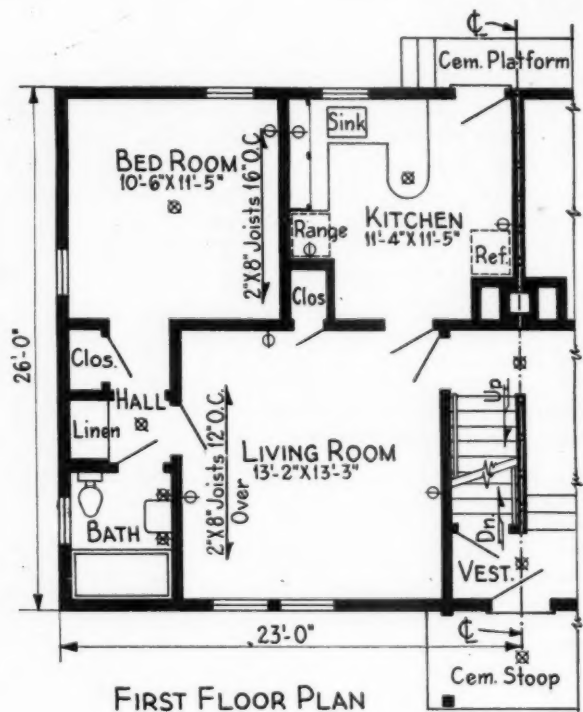
ONE of Malowney's Liberty houses getting the finishing touches in their own yard; it will be trucked away and set on foundation.

Ohio Builder Does His Best

(Continued from page 41)

This little house fills a definite need in Springfield, and it has been a profitable operation. Malowney Co. has sold nearly 50 of these units, ranging in price from \$289.50 to \$425, depending on inside finish. These houses in normal times can be used for garages or other types of small out-buildings.

Such enterprise and farsightedness as were shown by Malowney in developing these little houses indicate how a typical private builder can meet construction and sales difficulties and, at the same time, turn out a product that is greatly needed, if given



ANOTHER street view of Malowney Co. houses. Those in the foreground on opposite page are single-family units (most of these being inspired by material shown in "American Builder"). In the background can be seen multi-family units; typical floor plan of three-room apartment above.



the go ahead signal not subject to reversal at any moment.

The facilities of this company include an office and yard storage maintained in the downtown section of Springfield. They have a railroad siding and operate their own tin shop, cabinet and millwork plant, and paint shop. In the Springfield projects described above, the following are typical specification highlights: Red cedar exterior siding, USG sheathing and plaster base, Carey insulation, Armstrong linoleum, Standard Sanitary plumbing fixtures, Miami bath cabinets, and Lockwood or Russwin hardware.

...

LESS OF CRITICAL MATERIALS

(Continued from page 62)

where explosive mixtures of ether and air may occur.

This new linoleum is characterized by high wear resistance, flexibility, resilience, smoothness and freedom from cracking. Produced in a standard width of 6 feet, it is installed like ordinary linoleum, giving the same advantage of freedom from multiple joints. It is highly resistant to repeated washings with hot and cold water and does not slough off, wrinkle or buckle under ordinary conditions of use. It is substantially unaffected by ordinary solvents, such as alcohol, ether, petroleum derivatives, acids, and the like. Freedom from brittleness prevents cracks that would create isolated ungrounded areas or harbor explosive material.

This Nairn static conductive linoleum fully meets all specifications of Ordnance Department Safety Bulletin No. 25, Change No. 1, issued May 28, 1942, for floor and table covering in explosives operations.

Certain-teed Announces New Corrugated Asphalt Siding

CORRUGATED asphalt siding, a new, non-critical building material, has been developed by Certain-teed Products Corporation, Chicago. The siding is designed for use on outside walls of temporary structures of all kinds, including factory buildings, warehouses, storage and machine sheds, dairy and hay barns, stock sheds, drying sheds, grain storage bins, or any building where corrugated metal siding might normally be used.

The new material has a number of unique features. It consists of two layers of heavy rag felt, each saturated in a resin-bituminous compound recently developed by Certain-teed engineers. The two sheets then are bound together with a layer of high-melting-point asphalt and corrugated under high pressure. The resulting product is strong, light weight, moisture-proof and durable. The corrugations will not flatten out during summer weather, either in storage or after application due to the high melting-point heat-resistant resin used in the saturating process.

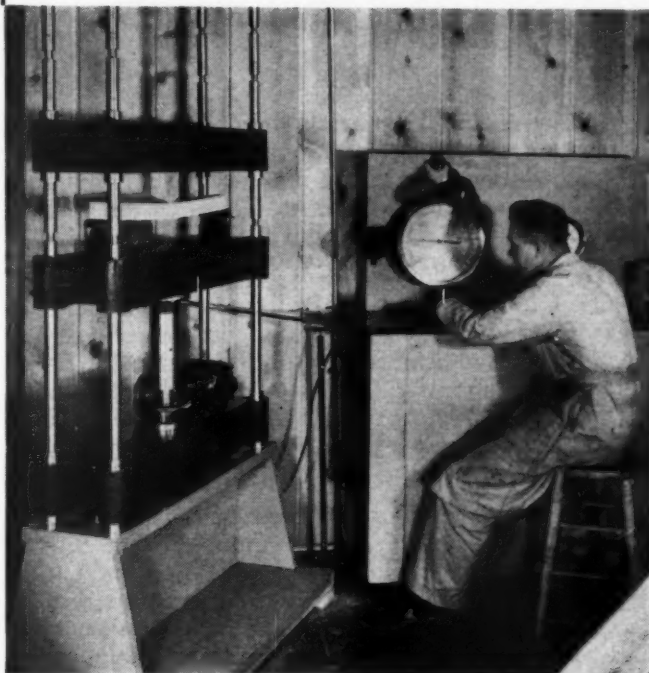
Certain-teed corrugated asphalt siding weighs approximately 12 ounces to the square foot, and individual sheets are easily handled or applied by one man. The sheets are 28" wide, in lengths of 6', 7', 8', 9' and 10'. The siding is quickly applied with ordinary roofing nails placed in the valleys of the corrugations.

...



Giving Western Pines "The Works"

Talk about a "third degree" . . . this 20,000 pound testing machine certainly gives it to Western Pines. Under the irresistible pressure of oil, every stress and strain the test piece of wood resists is recorded . . . until it finally breaks.



In these wartime days, as in the days of peace, the Western Pine Association Research Laboratory is constantly experimenting to determine new values, new uses, and to improve manufacturing procedures for the Western Pines.



WESTERN PINE ASSOCIATION

Yeon Building, Portland, Oregon

*Idaho White Pine *Sugar Pine *Ponderosa Pine

***THESE ARE THE WESTERN PINES**



This WOOD SPEEDS OUTPUT by Reducing Plant Maintenance

TEXTILE MILLS, like other manufacturers of badly needed materials for war, have a double task today—producing those materials and keeping their plants in condition to meet this demand. Wolmanized Lumber* makes this task easier.

DYE HOUSES, for example, are dripping wet much of the time. Wood construction offers many advantages here, but it must be wood that is able to withstand these high humidities. Because Wolmanized Lumber is that kind of wood, the mills using it are able to get along with far less maintenance. Valuable workers are available for production.

MILLIONS OF FEET of Wolmanized Lumber have been installed by the textile industry since they started using it eighteen years ago, for roof planks and timbers, flooring, doors and windows. Outstanding performance of this long-lived lumber under conditions conducive to decay long ago proved its worth.

WOLMANIZED LUMBER is able to resist decay and termite attack because it is deeply impregnated by the vacuum-pressure process with a proved preservative. In employing Wolmanized Lumber, you retain all of the usual advantages of working with wood: ease and speed of erection, lightness with strength and resilience. It is clean, odorless and paintable. American Lumber & Treating Company, 1645 McCormick Bldg., Chicago, Ill.

*Registered Trade Mark

WOLMANIZED LUMBER



Army Is Training Carpenters

(Continued from page 69)

A majority of the new soldier-carpenters were in the same profession in civil life. The army classifies them as mechanics, artisans, foremen, etc. The army doesn't try to "un-teach" them, but rather to bring about a common nomenclature for tools, work, problems, since there are considerable geographical differences to be interpreted and ironed out. Also, like any other kind of specialist, many of the carpenters have blind spots. Most of these are in special fields, such as blueprint reading; and the soldier-carpenter receives a valuable training that makes him not only valuable to the U. S. Army, but later a much better carpenter after the war.

Practical projects cover a wide list of Camp Lee improvements. Trainee-carpenters built a whole row of small 18 x 18 buildings for the Bakery School, all of the shelters at the rifle range, are now in the midst of preparing latrine buildings for new companies in the 10th and 12th Training Regiments.

About 6,000 double deckers for bunks have been constructed in the school for use in Camp Lee barracks, and many hundreds of rifle racks, as well as countless desks and files for Camp Lee's offices and classrooms.

There are plenty of problems studied in the school that could be of use to any American householder in peace-time. Here are some of the general questions: How can a saw be protected against dulling? Where should the grip of the hammer handle be? How is the cutting edge of a chisel and of a plane kept from getting dulled? Is birch wood better than maple? Is oak easy to work with? Is it good practice to drive screws with a hammer? The Army soldier will know all the answers when he has completed the course.



ABOVE: carpenter trainees build desk.

LEFT: Sgt. Reinke instructs in blueprint reading.



Construction Industry Licensed

(Continued from page 45)

A. Yes.

Q. Is the painting of a house or repairs to plumbing covered by the regulation?

A. Yes. The only exception is the owner who hires labor direct and supplies the material himself.

Q. Are contracts entered into prior to the date of the regulation covered?

A. No. However, a substantial modification or addition may be considered a new contract.

Q. Is the erection of a pre-fabricated house or demountable house covered by the regulation?

A. Yes. For the purpose of the regulation these are fixed structures.

Q. Is the conversion of heating plants from oil to coal or other fuel covered by this regulation?

A. Yes, except in certain states when Maximum Price Regulation No. 236 will apply. Maximum Price Regulation No. 236, which was drawn specifically to cover oil burner conversion, may have its coverage extended from time to time.

Q. Is the installation of machinery included under the regulation?

A. No. This is covered by Regulation No. 136.

Q. Is a structure housing machinery covered?

A. Yes. For example, in the installation of an artesian well, the price of the pump machinery and shaft is included under Regulation No. 136. The pump house and windmill derrick is under Regulation 251.

Q. Is the installation of sewers, conduits, aqueducts, and drainage under the regulation?

A. Yes.

Q. Are contractors doing grading, paving or other construction work for highways, roads, streets, etc., covered?

A. Yes. The regulation is intended to include all kinds of sales and services common to the construction industry, repairs, improvements, remodeling, and new construction work for residential, commercial, industrial, sanitation, communications, transportation, flood control, power development, reclamation and other similar projects or services.

Q. Are municipalities subject to the regulation?

A. Yes, their responsibilities are the same as any other owner or purchaser.

Determination of Maximum Prices

Q. How are maximum prices determined in transactions of less than \$500?

A. To the price which the seller would have charged for the sale or service in March, 1942, based on his then prevailing rates for labor and material and his then prevailing margins, the seller shall add increases in labor costs up to July 1, 1942, the date when the AFL Building Trade stabilization agreement with certain Federal agencies became effective. The total is the maximum price.

Q. How are the maximum prices determined on cost-plus contracts over \$500?

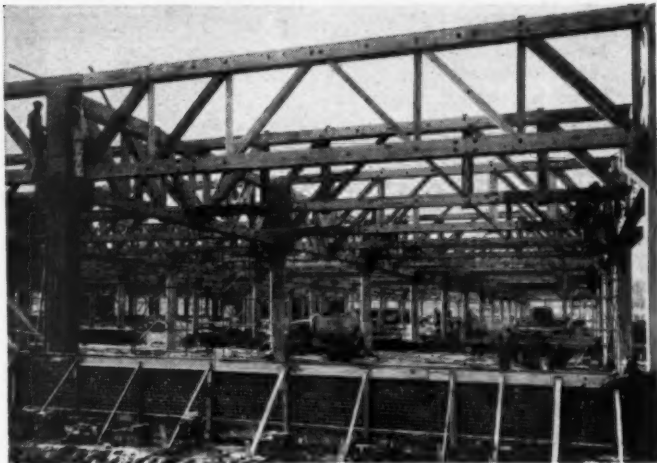
A. Maximum prices in this type of contract will be the sum of these factors: Materials and supplies at actual cost but not in excess of any applicable price regulation; labor at actual cost, but in amount not to exceed labor costs on the basis of the rates in effect in the area of installation on July 1, 1942; other direct actual costs, including costs of subcontracts, margin for overhead and profit, based on a comparable sale or, under certain circumstances, the seller's general experience and that of the industry.

Q. How are maximum prices determined on lump-sum contracts over \$500?

A. Maximum prices in this type of contract will be the sum of these factors: Estimated cost of materials and supplies but not in excess of any maximum price regulation; estimated labor costs on the basis of rates in effect in the area of installation on July 1, 1942; estimated reserve for contingencies; estimated margin for overhead and profit, based on a comparable sale or, under certain circumstances, the seller's general experience and that of the industry.

Q. What is total cost?

A. The total cost under a contract is the sum of all costs incurred by the contractor incident to and necessary for the



Rapid erection of war plants is demonstrating advantages of heavy timber construction.

BRIGHT FUTURE FOR TIMBERED CONSTRUCTION

WOOD was the principal heavy structural material when industry built its mills and factories after the Civil War.

Then steel "grew up", developed its structural shapes and riveted joints, providing adequate safety factors with less bulk than timber, so that the use of timber declined.

Prompted by this ascendancy of structural steel, timber research attacked the problem of reducing bulk, eliminating excess size, improving drying methods, simplifying joints and fastenings at no sacrifice of safety.

Results were effective and impressive . . . in reducing bulk and adding strength by lamination in place of solid timbers; in perfecting truss and arch designs; in lighter weight through improved seasoning; in fabricating to specifications at the mill; in better preservative treatments; in simplified joints and bearings using shear plates, grids or ring connectors with bolts to afford maximum stiffness and load-bearing strength.

With these improvements demonstrated in 20,000 or more recent structures, came World War II, today's dearth of structural steel, and the necessary switch to timber construction. *Significantly, builders immediately found it totally adequate, more economical, easier to erect . . . factors comprising sound reasons for its steadily expanding use when peacetime construction returns.*

As large suppliers of lumber and timbers on both civilian and wartime projects, manufacturers of Arkansas Soft Pine are prepared to furnish builders with technical data, specifications, etc., and will gladly do so on request. Just address:



**ARKANSAS SOFT PINE
BUREAU**

1242 BOYLE BUILDING, LITTLE ROCK, ARKANSAS

performance of the contract and properly chargeable thereto.

Q. What is meant by "other direct costs"?

A. Such items as:

1. Rental of equipment.
2. Social Security taxes on labor.
3. Unemployment compensation contributions.
4. Licenses, franchises, permits.
5. Premiums on surety bonds.
6. Workmen's compensation and public liability insurance premiums and fire insurance premiums on scaffolding, forms, equipment and materials.
7. Travelling in connection with expediting materials and equipment.
8. Job foreman, watchman, temporary lighting, temporary sheds and offices, cleaning, removal of rubbish.
9. Telephone and telegraph charges for field offices.
10. Temporary heat and fuel.
11. Other items of similar nature chargeable directly to job cost, such as surveys, wall tests, soil and material test directly related to job, freight and hauling not chargeable directly to any material item.
12. Water for building purposes.
13. Power for building purposes.

Q. What is meant by overhead costs?

A. Administrative costs, such as general office expense, salaries of general office, engineering, legal, accounting, advertising costs, depreciation and depletion of office equipment, auto expense, travelling, association dues, and other fixed charges which usually are apportioned to job cost, social security taxes for office employees, and state and local taxes (other than income taxes).

Q. Are contractors limited to these listings for "other direct costs" and "overhead costs"?

A. No. They may follow their usual practices for these charges.

Q. What is meant by reserve for contingencies?

A. An amount (only if usually figured by contractor) for unforeseen additional costs, such as costs incidental to delays due to weather conditions, failures in delivery of materials,

strikes, penalties, productivity of labor, accidents, and for other causes beyond the control of the contractor.

Q. Is carpenter work, such as putting together of trim or stairwork, done at contractor's shop, chargeable as direct cost?

A. Yes. Fabrication of parts of the structure if done with the contractor's own forces need not necessarily be done at the site of the job.

Q. Would rental of storage space for materials for a particular job be considered as direct cost?

A. Yes, if the necessity for storage results directly from the job.

Q. In the transfer by the contractor of materials from one job to another, what may the contractor charge for such materials?

A. These should be charged at cost, in no case to exceed the maximum prices at which the material could be purchased under the applicable maximum price regulation.

Q. What charges may be made by a contractor who carries "self insurance"?

A. The actual cost of such insurance, not exceeding the lawful or approved rates of insurance companies, may be included under "other direct costs."

Q. May "small tools" and "non-durable tools" be included under the term materials?

A. Yes.

Q. May sundries and supplies be included under the term materials?

A. Yes; nails and solder are examples of this.

Q. Must contracts of \$500 or less be reported to the Office of Price Administration?

A. No.

Q. What, briefly, are the requirements for reporting contracts above \$500?

A. Every such contract entered into must be reported to the nearest district, State, or regional office of the Office of Price Administration.

In the case of lump-sum contracts, a two-fold report is needed: *First*, within 10 days of entering into the contract, a report describing the job and showing estimated costs and

JOBS ARE WHERE YOU SEEK 'EM



...IT'S SMART TO DIG 'EM OUT!

The existing homes in America must be maintained and kept livable during the war. There are approximately twenty-five million homes in the United States today—of these, more than 54% are over 25 years old. Here is an Over-Roofing market made to order for you and for non-critical Red Cedar Shingles.

Covering old, unsightly sidewalls with double-coursed or single-coursed Red Cedar Shingles offers another good market.

Study the illustration—then act. The Red Cedar Shingle Bureau is offering you working blue-prints which show the proper shingle application for roofs and sidewalls. Send for your set today. Address:

RED CEDAR SHINGLE BUREAU

5508 White Building, Seattle, Washington, U. S. A.
Canadian Office: Metropolitan Building, Vancouver, B. C.

BUY U. S. WAR BONDS



Red Cedar SHINGLES

margin and the contract price. *Second*, at least 10 days before the anticipated final settlement at the same district, State or regional office, a report listing actual costs. (Estimate sheets or other working papers may be filed as the report.)

In the case of cost-plus contracts, only one report is needed. To be filed within 10 days of entering into the contract; it must describe the job, give an estimate of costs and include a statement of margin.

Q. What records must be retained by the seller?

A. The seller shall keep available for inspection by Office of Price Administration representatives records for each transaction, showing the name of the purchaser, the date of the transaction, a description of the commodities and services involved and a detailed statement of the method by which the maximum price was calculated, together with all such records as he has customarily kept.

Q. Must the seller give his customer a certificate of compliance with regulation where contract is for less than \$500?

A. Only when it is demanded by the purchaser.

Q. Are these written certificates of compliance with the regulation necessary on contracts of \$500 or more?

A. Yes, the seller must provide them in these cases. Duplicates of these certificates must be filed with the nearest district, State or regional office of the OPA.

Q. What are the provisions for licensing?

A. Any contractor affected by the regulation is automatically licensed on and after November 5 as a condition of doing business.

Q. Is it necessary to register licenses?

A. No. The Office of Price Administration may issue definite requirements in the future.

Insulation Institute Helps Save Fuel

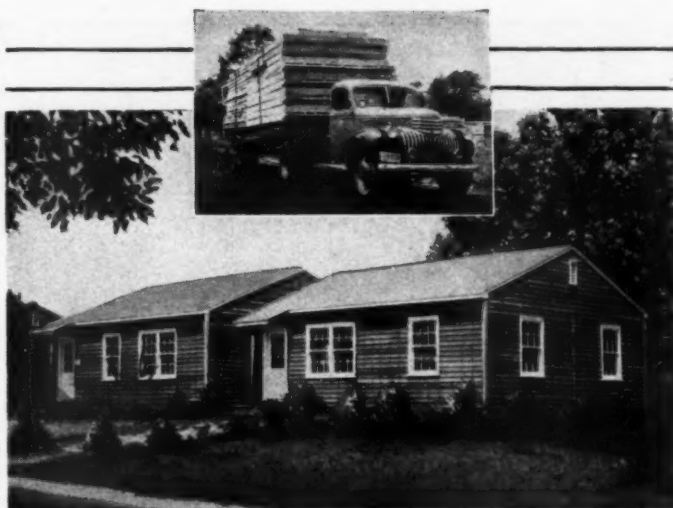
"FUEL is a weapon of war—don't waste it!" Posters bearing this warning, and urging home owners to see their lumber and building materials dealers about insulation, are now appearing in banks, post offices and other prominent locations all over the country. More than 100,000 of them were prepared by the Insulation Board Institute, Chicago, in co-operation with the government's fuel conservation program. The Office of War Information, Washington, D.C., is distributing them.

SAVE FUEL..
INSULATE YOUR HOME

FUEL IS A WEAPON OF WAR...DON'T WASTE IT

Ask your Building Materials Dealer about
Insulation Board for Homes..Attic rooms..Garages..Windows

INSULATION BOARD INSTITUTE



WAR HOUSING TODAY— low-cost housing tomorrow

5,000 Homasote Precision-Built Homes for Norfolk Navy Yard workers—built at the record-breaking average rate of 50 houses a day—are now nearing completion. This project follows 973 Homasote Homes built at Vallejo, California, for employees of the Mare Island Navy Yard . . . 500 Homasote Homes at Fort Leonard Wood, Missouri . . . \$6,000,000 worth of Homasote Homes for private owners constructed before the present emergency.

Yet we say: **THIS IS ONLY THE BEGINNING** . . . not only for us, but for those builders who have the foresight to look ahead to the years after Victory.

Everything we have done to date, now becomes a foundation for the big job ahead: to provide post-war America with low-cost housing for a vast market that has never been tapped before.

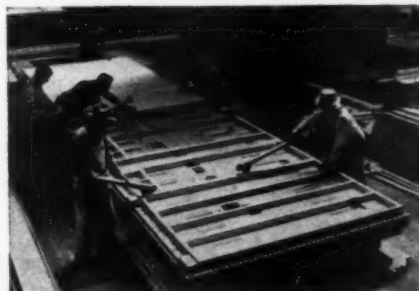
Homasote is the oldest and strongest insulating and building board on the market. Its economy and weatherproof qualities are thoroughly time-tested.

The use of 8' x 14' sheets of Homasote (3 1/2 times as big as other boards)—saves both time and labor, materially lowers construction costs, eliminates unsightly batten strips and wall joints.

The development of Homasote Precision-Built Construction—back in 1935—brought about the application of sound engineering principles to the building of homes.

Homasote Company's enlistment in the war program—building homes for war workers faster and better than ever before, as at Portsmouth and Vallejo and Fort Leonard Wood—has led to constant improvements in technique.

We repeat: *the vast, low-cost, post-war market will belong to those builders who have the foresight to look ahead now.* Homasote Precision-Built Construction uses local labor and standard materials—replaces guesswork with known costs and sure profits. Write us for the complete details.



HOMASOTE COMPANY . . . TRENTON, N. J.

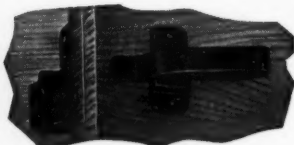
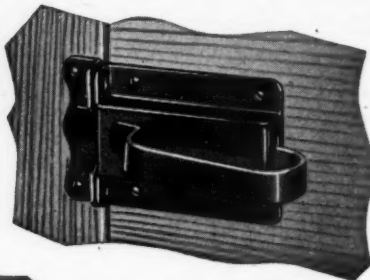
WAGNER

DANDY REVERSIBLE LATCH NO. 847!

FOR SWINGING DOORS....POPULAR PRICED

Center screw
covered by
latch bar at
all times.

Convenient
padlock eye
for security.



Furnished with back latch to
protect door from damage,
from wind, etc.

Here is a quickly installed, economical and efficient latch for swinging doors. Fits right or left hand doors without changing spring. Long latch bar permits space up to $\frac{3}{4}$ " between door and jamb.

WAGNER MANUFACTURING COMPANY
Dept. AB-1242, Cedar Falls, Iowa

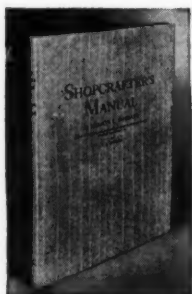
Just Off the Press

SHOPCRAFTER'S MANUAL

By Nelson L. Burbank

Author of *House Construction Details*

and E. M. Mitchell



This new book contains the projects that have appeared in the *Shopcrafter's Corner* of *American Builder* and *Building Age* within recent years. It also contains projects from *Popular Homecraft* and selected power wood-working booklets. There are some 150 projects ranging from bird houses to garden and indoor furniture of latest design.

All furniture projects have clean lines and balanced proportions and will take the modern light finishes. The variety is large enough to provide a choice for every room in the

house. Commercial woods and veneers obtainable in war-time can be used. Large working drawings show construction details, photographs picture the finished articles and bills of materials are accompanied by step-by-step instructions.

142 pages, 150 projects, $8\frac{1}{2}$ x 11, cloth, \$2.00

Book Department

**AMERICAN BUILDER AND BUILDING
AGE**

30 Church Street New York, N. Y.

LOOKING AHEAD

(Continued from page 16)

was \$9,010. In 1937 many more homes were built and the average value was \$7,713. In the following years the downward slide continued, as follows: 1938, \$7,053; 1939, \$6,538; 1940, \$6,392; 1941, \$6,604; and for the first nine months of 1942, \$5,215. In the city of Chicago the 1936 average was \$6,143. This scaled down to \$5,420 in 1941; and to \$4,815 in the first nine months of 1942. The cost of the Defense homes—not over \$6,000 for house and lot—will give many families the idea that \$5,000 is the right amount to pay for building a very good home. After the war \$5,000 should produce the best home, all things considered, the world has ever known. It will be a home that is a home, not an architectural freak full of contraptions to provide softer comforts and save work. Such houses, though they amused millions at "A Century of Progress" and the New York World's Fair, have never sold in a big way. After the war we want home building to leap to maximum production and this will be effected by offering conservatively designed homes, mass-produced as far as possible for sounder structure, lower cost of maintenance, permanence, convenience, comfort and beauty but not standardized to the exclusion of individuality. We shall achieve the fullest measure of success in the post-war era if we build homes of the American types. Never in the history of this country were they more greatly desired.

ARTHUR G. ERDMANN, President,
Bell Savings and Loan Association.

Public Will Settle House Question

New York, N. Y.

Editor Post-War Home:

The late Arthur Brisbane—who composed some of the most influential American newspaper editorials—used to delight in printing on the eve of an important boxing match, a photograph of the two contenders with this brief caption: "And a gorilla could lick them both!"

Much of the discussion about the House of the Future—the Post-War Home—has revolved around the quickening contest between public and private housing. Public and private housing are in somewhat the same position as those two conventional fisticuffers. An unbeatable gorilla in the guise of *public preference* could, and will, settle their differences without consulting either one of them! It is the folks who will do the home-living, rather than the home-building, who will hand down the final decision on whether our post-war home is to be a private or a public enterprise.

This arrangement is, after all, the better and more American way of doing it. We have no desire to impose our will on the mass of home dwellers. By the same token, we hope that government will observe a similar restraint. It should be noted, however, that though we do not dictate the final decision, we can at least influence it.

Such influence should take only one form: We should demonstrate, with actual homes for real people, that economical, safe housing for all Americans can be provided without subsidies. Every family, whether it lives in city, town or on a country hillside, should have the opportunity to "live" the benefits of a richer life made possible by improvements in home design and building.

Specifically, what does this mean? It means that building material manufacturers should continue to develop new materials.

It means that building labor should continue to help develop time-saving techniques. It means that architects should continue their research on low-cost planning of both the city and the rural home. That realtors and land planners should help pare the high cost of buying land; of installing utilities and tying them in with adjoining, existing systems.

And to complete the job, we should show how we can buy more housing for our money. We must show how to build and buy quality when we purchase our homes. We must be taught the importance of living in "stabilized" communities—communities that will not become future slums due to shoddy construction.

All of these problems are the concern of the building industry. The scattered, unorganized parts of the industry are undoubtedly doing a grand job of meeting them. But as a group—as an industry—little is being done to help correlate these local efforts.

J. S. BRYANT,
Managing Director, Asphalt Roofing Industries Bureau.

LETTERS—

(Continued from page 20)

Declares Private Builders Are Utilized

Washington, D. C.

To the Editor:

The principal thought of your November editorial seems to be that the war housing problem can best be solved through the activity of a great number of private builders.

From the inception of the war housing program we have made every effort to promote construction by private industry to the extent of its capacity to produce and to the extent that housing so built might be required after the war. These operations have in no way been restricted to large builders, even before the development of the conversion program which obviously will require the services of many small builders.

As for the encouragement of enterprise in the housing field through the elimination of rulings, regulations, and priority problems, the establishment of the blanket ratings referred to in the editorial is due largely to the efforts we have been making in that connection. You may be assured that those efforts will be continued in other directions, but with the full knowledge of the great need which exists for the conservation of materials required in the production of combat equipment and other equipment directly related to it.

WILLARD F. DAY,

Program Supervisor, National Housing Agency.

Sullivan Jones Explains

New York City, N. Y.

To the Editor:

I am aware of the pressure of new housing in many areas where substantial expansion of producing facilities is taking place. As you of course know, the supply of critical materials which can be made available for housing is increasingly difficult to maintain in the face of competing demands from our war industries and the Armed Forces.

Therefore, it is not always possible to permit construction in a given locality of the total number of houses which we know to be needed there, nor to permit construction to proceed as early as might be desirable.

Issuance of priorities for private-built War Housing was halted last week, because the current allotment of steel and companion materials had been exhausted. The release today (Nov. 11) of an additional amount of material makes it possible to modify last week's instructions, thereby allowing a limited construction of War Housing. However, the construction must comply with the new standards of design, material consumption and the use to which they may be put, which directive became effective October 28, 1942.

SULLIVAN W. JONES, Chief,
Housing Branch, Bureau of Construction,
War Production Board.

Yes; Write Fir Door Institute, Tacoma

Great Falls, Mont.

To the Editor:

I was very much interested in your article on the "Willis-Way" structural panels in the September issue. Inasmuch as we expect a small defense housing project in the area soon, I would like to inquire where I might obtain more information about this type of construction and also, whether any of the door manufacturers have been set up to manufacture any of these panels as yet.

GROGAN-ROBINSON LUMBER COMPANY,
By F. H. Robinson

More Found in This Issue

Toledo, Ohio

To the Editor:

Your editorial, "Freedom Abroad—But Not at Home," in the November issue of *American Builder* hits the spot. More statements of this nature will aid business men and clarify the situation.

BOATFIELD REALTY COMPANY,
By R. G. Boatfield, President.



WE FORMERLY WERE IN THE BUSINESS
OF MAKING IT COOL FOR AMERICANS...



OUR WHOLE JOB NOW IS MAKING
IT HOT FOR THE NAZI-JAPS!

★ Victor Electric Products, Inc. ★
★ CINCINNATI, OHIO ★
★ Dept. 18 312 ★

Bathe-Rite SHOWER CABINETS

**Help You Finish War
Building Projects
ON TIME!**

Today, when time and labor are precious commodities, Contractors and Builders are saving hundreds of vital MAN-HOURS by using BATHE-RITE SHOWER CABINETS on their Multiple-shower installations.

Even with unskilled help, BATHE-RITE CABINETS can be installed in 25% less time than ordinarily required. Exclusive, quick-assembly features make this possible. Attractively styled.

**Two Standard Models
Meet Every Need**

**WRITE OR WIRE FOR
PRICES AND DETAILS**

Give name of project and quantity required. Delivery assured on any quantity, when and where needed.

**Bathe-Rite division
MILWAUKEE STAMPING COMPANY**
826-S South 72nd Street
Milwaukee, Wisconsin



QUALITY-BUILT by Bathe-Rite

Now Opening Doors for "Wasps" to Sting the Axis!



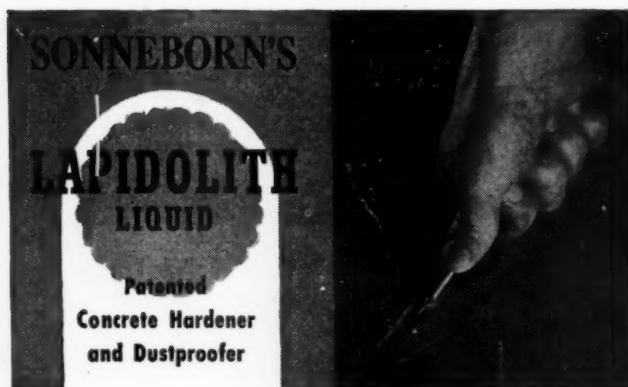
Allith

HEAVY DOOR HARDWARE

Practically every pound of our production, every day, is being rushed to the armed forces. Plane hangar doors, Army and Navy buildings in many places are being equipped with Allith Hardware. But we haven't forgotten YOU. And after Victory, you can depend on perfected Allith designs of garage-door hardware, expanded Allith facilities to serve YOUR demands.

ALLITH-PROUTY, INC.

DANVILLE, ILLINOIS



SURE SIGN OF A FLOOR THAT NEEDS LAPIDOLITH

Any concrete floor that can be scratched easily, needs the extra protection of Lapidolith Liquid to assure long, dust-free and heavy-duty service.

Lapidolith Liquid, because of its unique, patented improvements, is not expensive to use, yet gives greater protection against wear. It can be applied easily to new or old floors.

Write today for the factual booklet, "Concrete and Lapidolith Liquid," giving full details.

Where Results Count—Count on Sonneborn

L. SONNEBORN SONS, Inc.

88 Lexington Avenue

New York, N. Y.

New Restrictions on Machinery

(Continued from page 64)

dealer is acting as agent.

(h) *Prohibiting transfer and use of equipment.* On and after November 15, 1942, no producer shall use for other than experimental or demonstration purposes or sell, lease, trade, lend, deliver, ship or transfer, any new equipment and no person shall accept the same unless:

(1) Such equipment is then in transit to such person, or

(2) Such use, sale, lease, trade, loan, delivery, shipment or transfer is specifically approved by the Director General for Operations as follows:

(i) On or before November 15, 1942, and on or before the fifteenth (15) day of each succeeding calendar month, each producer shall file in triplicate on Form PD-697 showing his proposed delivery schedule of all unfilled orders of new equipment, shipments made during the calendar month previous to filing and the current month to date of filing. The delivery of all such new equipment scheduled for the calendar month following the date of filing shall be deemed to be authorized by the Director General for Operations on the first day of such calendar month unless the Director General for Operations shall otherwise direct.

(ii) The delivery of all new equipment as scheduled for delivery on or before November 15, 1942, and previously authorized under Limitation Order L-82 and L-82-a, shall be deemed to be authorized, unless the Director General for Operations shall direct otherwise.

(iii) The Director General for Operations, at any time, may revoke delivery authorization provided for in paragraphs (h) (2) (i) and (h) (2) (ii) as to any or all new equipment, direct or change the schedule for deliveries, allocate any order listed on Form PD-697 to any other producer, or direct the delivery of any new equipment to any other person, at regularly established prices and terms.

(iv) No producer shall change the schedule of deliveries as listed on said form, or as directed or changed by the Director General for Operations, without specific authorization of the Director General for Operations.

(i) *Restriction on resale, rental and use.* (1) On and after November 7, 1942, all persons except a Government corporation, the Army, Navy, Maritime Commission, War Shipping Administration or Lend-Lease government to whom delivery of any new equipment listed in Schedule A has been authorized pursuant to paragraph (d) must use such equipment on the project described in the authorization to purchase and will be subject to the provisions of paragraphs (i) (2) and (i) (3) hereof.

(2) All persons except a Government corporation, the Army, Navy, Maritime Commission, War Shipping Administration or Lend-Lease government, thirty days prior to the sale, lease or use on any other project of such equipment, shall complete, sign and return Form WPB-1159 to Used Construction Regional Specialist in the War Production Board Regional Office in the region in which such equipment is located.

(3) The Director General for Operations, at any time on two weeks' written notice, may require such person who owns such equipment to sell, lease or use such equipment as directed.

(4) Nothing in this order shall restrict the application of Limitation Order L-196 in regard to the filing of Form WPB-1333.

(j) *Restrictions on sale and delivery of repair parts.* (1) All orders for repair parts for equipment in use on essential projects in the United States or Canada shall not be individually rated but shall carry the highest preference rating of the project and shall be subject to the following limitations:

(i) No person shall purchase repair parts during the calendar quarter commencing October 1, 1942 or any calendar quarter thereafter, in excess of 5% of the original purchase price of the equipment for which the repair parts are ordered unless authorized by the Director General for Operations on Form PD-556.

(ii) No producer, dealer or distributor shall sell or deliver repair parts to any person unless such person has furnished the information and certification called for below in a writing signed by such person and in substantially the following form.

Repair Parts for Maintenance and Repair.....Rating.....
Contract Number.....in accordance with Limitation Order L-192
with the terms of which I am familiar.

Date

Purchaser
By:

Such certification shall constitute a representation to the Director General for Operations that such repair parts are required for the purpose of repair of actual or impending breakdown or proper maintenance of the equipment and that the applicant does not have such parts available for this purpose.

(2) Orders for spare parts for new equipment listed in Schedule A shall be placed at the same time as the order for new equipment and must be authorized on Form PD-556 by the Director General for Operations.

(3) Any conditions in regard to purchase or delivery of repair parts not covered herein shall be in accordance with current regulations and orders of the War Production Board.

(k) *Substitution and conservation of critical materials.* In the manufacture of any item of equipment or repair parts, no producer shall use any alloy steel, stainless steel, aluminum, magnesium, copper, brass, bronze, zinc, nickel, tin, cadmium or fabricated rubber products where the use of other less critical materials will not impair the efficiency of operation of such item.

(l) *Records.* All persons affected by this order shall keep and preserve for not less than two (2) years accurate and complete records concerning inventories, purchases, production and sale.

(m) *Audit and inspection.* All records required to be kept by this order shall, upon request, be submitted to audit and inspection by duly authorized representatives of the War Production Board.

(n) *Violations.* Any person who wilfully violates any provision of this order, or who in connection with this order, wilfully conceals a material fact or furnishes false information to any department or agency of the United States is guilty of a crime, and upon conviction may be punished by fine or imprisonment. In addition, any such person may be prohibited from making or obtaining further deliveries of, or from processing or using material under priority control and may be deprived of priorities assistance.

(o) *Appeal.* Any person affected by this order who considers that compliance therewith would work an exceptional and unreasonable hardship upon him, or that it would result in a serious problem of unemployment in the community, or that compliance with this order would disrupt or impair a program of conversion from non-defense to defense work, may apply for relief by addressing a letter to the Construction Machinery Branch, War Production Board, Washington, D. C., setting forth the pertinent facts and the reasons why such person considers that he is entitled to relief. The Director General for Operations may thereupon take such action, if any, as he deems appropriate by the amendment of this order or otherwise.

(p) *Communications.* All communications concerning this order except where specific reference is made herein to the contrary shall be addressed to Construction Machinery Branch, War Production Board, Washington, D. C., Ref: L-192.

Issued this 7th day of November 1942.

ERNEST KANZLER,
Director General for Operations.

Schedule A

The items of construction machinery and equipment appearing in Schedule A are subject to all the paragraphs of this order.

Items which appear in both Schedules A and C may be ordered and produced only for military purposes as stated in paragraph (d) (1) (ii) and (e) (4).

Angledozer and modifications thereof; construction material batchers; construction type batching plants; construction material portable bins; construction material stationary bins; contractors rotary brooms; bulldozers and modifications thereof; crawler mounted power cranes; tractor mounted power cranes; rubber tired mounted power cranes; jaw and roll portable type crushers; portable type crushing plants; guy derricks; stiff leg derricks; bituminous distributors; ladder ditchers; wheel ditchers; draglines, see cranes; slack lime draglines; walking draglines; dredges and dredge equipment; blast hole drills; core drills; rock portable mounted drilling machines; construction aggregate dryers; earth boring machines; excavators; self-propelled finegraders and subgraders; concrete finishers; bituminous paving finishers; concrete road forms; blade or pull type earth moving graders; elevating earth moving graders; self-propelled earth moving graders; grapples; pile hammers; tank car heaters and circulators; contractors hoists; portable bucket (other than coal) loaders; road maintainers; shoulder maintainers; bituminous cold mix type mixers—10 tons per hour capacity or more; agitator concrete truck type mixers; concrete truck mixers mounted with elevating towers; concrete construction mixers—above 10 cu. ft. size; concrete pavers; stabilizing plants; asphalt plants; snow-V and blade type, truck, tractor or grader mounted plows; snow rotary type plows; control units for tractors—both cable and hydraulic power.

Pumps. Portable engine or electric motor driven pumping units mounted on skids, with or without handles, or trailer mounted, larger than 90 M

ON BIG JOBS... SMALL JOBS... ALL JOBS...

SKILSAW

SPEEDS EVERY CUT IN EVERY MATERIAL!

Whatever you're building, you'll finish faster with SKILSAW. It speeds all sawing in wood, metals, stone and compositions. On remodeling, small housing units or big arms plants, SKILSAW speed makes every man, every minute count for more!

SKILSAW is lighter, more compact, more powerful. That's why it's the favorite with 9 out of every 10 War Contractors. Ask for a demonstration of SKILSAW now!

SKILSAW, Inc.
5031 Elston Avenue, Chicago

9 POWERFUL MODELS



WEATHER, TOO, CAUSES WASTE AND DESTRUCTION



Every Home and Building Owner
Needs the Protection of

PECORA CALKING COMPOUND

It costs little to seal all building joints and all door and window frames exposed to weather. Deterioration is stopped at once. Fuel saving starts immediately. Pecora Calking Compound will not dry out, chip or crack when properly applied. Available in bulk or in special gun cartridges. You can depend upon Pecora to give unsurpassed results.

WRITE
FOR
BOOKLETS

Pecora Paint Company, Inc.

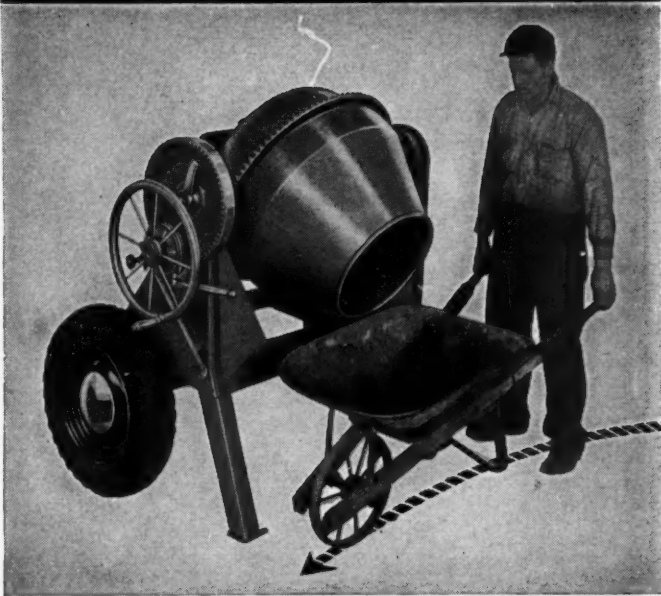
Member of Producers' Council, Inc.
Established 1862 by Smith Bowen

Fourth St. & Reading R. R. Philadelphia



ALSO MORTAR STAINS • SASH PUTTIES • ROOF COATING
• PECOMASTICS FOR STRUCTURAL GLASS INSTALLATION

3 1/2-S TILTING KWIX-MIX



End discharge
Air-cooled engine
Light weight
Welded construction

Anti-friction bearings
Spring mounting
High speed trailing
Write for Bulletin AB

KWIK-MIX CONCRETE MIXER CO.
PORT WASHINGTON . . . WISCONSIN

SIMPLIFIED CARPENTRY ESTIMATING

By J. Douglas Wilson

Head of the Building Trades Department, Frank Wiggins
Trade School, Los Angeles, California

and Clell M. Rogers

Mathematics Instructor, Venice High School, Venice,
California



Based on a series of articles by Mr. Wilson entitled *How to Estimate Accurately*, which appeared in *American Builder and Building Age* last year, the material has been revised and expanded into this book. Many of the original illustrations have been changed and the number of helpful tables and mathematical short cuts have been increased by Mr. Rogers.

This new book clearly explains the "taking-off" of a bill of materials required for the construction of a house and the rules and methods of making an accurate estimate of costs. The constructional order of quantity survey is used. Many skilled carpenters who have taken Mr. Wilson's evening school courses in estimating have helped in making the explanations given in this book clear and practical.

210 pages, 71 illus., 36 tables, 5 x 7, cloth, \$2.50.

Book Department

AMERICAN BUILDER and BUILDING AGE
30 Church Street New York, N. Y.

gallons per hour self-priming centrifugal pumps, horizontal or vertical triplex piston road pumps, ordinarily used for contractors' purposes or by contractors for dewatering and supply, as defined and approved in Contractors Pumps Standards by the Associated General Contractors of America, Inc. (A. G. C.), February 21, 1941.

Road rippers; road pneumatic tired rollers; road portable rollers; tamping and sheepsfoot rollers; road tandem rollers; road three-wheeled rollers; carrying and hauling, both drawn and self-propelled scrapers; portable type screening plants; crawler mounted power shovels; rubber tired mounted power shovels; tractor mounted power shovels; concrete spreaders; street sweepers; street motor pick-up sweepers; contractors' crawler wagons; portable type washing and screening plants; tractor mounted winches.

Schedule B

The items of construction machinery and equipment appearing in Schedule B are subject to all the paragraphs of this order except:

1. Paragraph (d), controlling the procedure for placing and receiving orders.

2. Paragraph (j), restricting resale, rental and use of equipment.

Blade bits; grader blades; paving breakers; clamshell buckets; concrete buckets; dragline buckets; orange peel buckets; scraper buckets (bottomless) for dragline operation; concrete hand operated buggies and carts; concrete power propelled buggies and carts; centerline markers; concrete handling chutes; concrete surfacing machines; construction material conveyors; gyratory and cone (portable type) crushers; road disc; water distributors; blade ditchers; jack hammer drills; rock except portable mounted drills; joint and crack filling machines; drawn type finegraders and subgraders; floor (other than wood) finishers; form tamping machines; under truck type graders; asphalt surface heaters; concrete mixer heaters; portable concrete hoppers; mud jacks; joint levellers; bituminous heating kettles; portable snow loaders; aggregate pulverizers mixers; bituminous, cold mix type, under 10 ton per hour capacity mixers; concrete construction, 10 cu. ft. and smaller mixers; plaster and mortar mixers; paving breakers; cable laying plows; concrete pumps.

Pumps. Portable engine or electric motor driven pumping units, mounted on skids with or without handles, or trailer mounted, 90,000 gallons per hour and smaller self-priming, centrifugal pumps, plunger pumps, or diaphragm pumps ordinarily used for contractors' purposes or by contractors for dewatering and supply as defined and approved by the Associated General Contractors of America, Inc. (A. G. C.), February 21, 1941, excluding farm type, industrial type and Underwriters approved fire fighting pumps.

Scarifiers; drag, fresno and rotary scrapers; rotary vibrator and gravity type screens, other than coal and industrial; bituminous material sprayers; aggregate spreaders; concrete placing towers; material elevating towers; concrete vibrators; contractor winches.

Schedule C

The items appearing in Schedule C may be ordered and produced only for military purposes as provided in paragraphs (d) (1) (ii) and (e) (4).

Construction material batchers; construction type batching plants; construction material portable bins; construction material stationary bins; contractors' rotary brooms; scraper buckets (bottomless) for dragline operation; concrete hand operated buggies and carts; concrete power propelled buggies and carts; centerline markers; concrete handling chutes; concrete surfacing machines; construction material conveyors, except when a part of portable crushing plant; guy derricks; stiff leg derricks; road disc; blade ditchers; dredges and dredge equipment; core drills, drilling machines; portable well drilling machines; construction aggregate dryers, except portable type; joint and crack filling machines; floor (other than wood) finishers; form tamping machines; blade or pull type earth moving graders; elevating earth moving graders; self-propelled earth moving graders; under truck type graders; grapples; asphalt surface heaters; contractors' hoists; portable concrete hoppers; mud jacks; joint levellers; road maintainers; shoulder maintainers; asphalt plants except portable travel-mix type; cable laying plows; snow-V and blade type, truck, tractor or grader mounted plows; road pneumatic tired rollers; road tandem rollers; road three wheeled rollers; drag, fresno and rotary scrapers; portable type screening plants; street sweepers; street, motor pick-up sweepers; concrete placing towers; material elevating towers; portable type washing and screening plants.

* * *

Fireproofing of Wood Discussed at Conference

REALIZING the urgent need for fire resistant materials to use in place of critical metals, lumber manufacturers and distributors, city and federal officials, wood treaters and chemical manufacturers, architects and engineers, insurance underwriters, and testing laboratory technicians discussed fireproofed lumber at a recent conference at the Underwriters' Laboratories, Chicago, where demonstrations were conducted. Discussion centered around questions concerning fireproofing treatment and its looming importance, both for present wartime building and post-war residential and industrial construction.

Production of fireproofed lumber has been sharply boosted in the past few months to meet military demands, according to wood treaters. J. F. Linthicum, president of American Lumber & Treating Company, Chicago, estimates that the industry is capable of approaching an annual production of several hundred million board feet. Wood-treating plants throughout the nation are not fully converted to handling the fireproofing processes at present, he reports. Much of the vacuum-pressure equipment needed is being used for treating wood for other purposes, mainly to resist termites and decay.

We're the Suicide Troopers

(Continued from page 39)

lises, etc., is a factor in keeping war workers satisfied and productive.

2. Less wastage in maintenance. Greater care taken of the home, which represents a private investment.

3. Less likelihood of ghost communities. An in-migrant becomes permanently installed.

4. More efficient use of priorities by private builders. In fact, the private builders were much more successful in procuring materials than public housing projects, which in many localities were stymied until additional priority ratings were granted. (The private builder demonstrated his ability through the established channels of private industry to absorb stocks of materials. His flexibility enabled him to use up surplus stocks of manufacturer, wholesaler and jobber. He adjusted himself to conditions as he found them, and therefore interfered less with the war reservoirs of critical material.)

Privately Built Houses Have More Appeal

5. Greater public acceptance of privately-built war houses. Private housing doesn't have to "wait to fill up." Local experience has been that private war housing sells or is rented during the construction stage. At the present time in our Westchester Project, qualified occupants are already waiting for houses for which we are just pouring the foundation. There are many public housing projects throughout the country that have large percentages of vacancies. These may be filled because of continued demand, but they do not have spontaneous public acceptance.

6. Privately-built housing is less apt to be wasteful or excessive beyond the actual need in areas subject to fluctuating populations. It is meticulously programmed and allocated through NHA and is further screened through the economic judgment of the lending institutions which must provide the capital. Most important, it is guided by the acutely keen localized judgment of the private builder who contributes the enterprise and the financial risk.

Also Consider Post-War

Public temporary war housing may be accepted as one of the war's emergencies (and even one of the sacrifices to be borne by American home-lovers). But to allow the war to give an unjustified impetus or foundation for a post-war public housing program—the ill-gotten victory anticipated by public housers—will make us sadly remember this war as the period when America lost one of the heritages and fundamentals which made home ownership an aspiration in this country.

Better post-war housing for America is a fine idea; individual homes are still a better idea; and the ownership of those homes by American families is the best idea.

If housing needs subsidizing, then let us subsidize home ownership. Private builders have proven that they can build detached units just as cheaply as public housing has built multiples. The matter of down payments or monthly payments (in lieu of rentals) is purely a routine matter on the part of government (an adjustment or waiver of interest); a longer amortization period of the loan.

If, as some public housers say (and we dispute), the lower income classes do not know how to take care of their own home, then it is time that we teach them instead of subjecting them to the ignominy, the dependency, the contagious irresponsibility of government supervised and maintained and regimented "housing projects."

**"You did us a Big Favor,
MR. BUILDER!"**



"Yes, you did us a big favor when you recommended a Heatilator Fireplace," say hundreds of owners.

The circulated heat of Heatilator Fireplaces is warming entire living rooms, and adjoining rooms, too. It is saving the waste of furnace fires on cool fall and spring evenings . . . helping to meet the problems of fuel rationing and shortages.

Because of war work, no more Heatilator Fireplaces can be built for the duration. But you, Mr. Builder, have the satisfaction of knowing that the Heatilator Fireplaces you did install are winning you favor because they . . .

**CIRCULATE HEAT
SAVE FUEL
WILL NOT SMOKE**

HEATILATOR, INC.
9112 E. Brighton Ave.
Syracuse, New York



HEATILATOR *Fireplace*

**PLACE
YOUR
Sawing**



**Model 85
Capacity 8½"**

**ON A
FACTORY PRODUCTION BASIS**

with A Mall Saw

**SPEED UP Defense Housing
and War Plant Construction**

Builders are saving vital minutes, man hours and material with this powerful MALLSAW that handles every cutting job with production line speed and precision. It is fast and efficient. It will cross-cut or rip any kind of dressed lumber up to 2¾" in a jiffy. It is simple and easy to use and perfectly balanced for either hand. Equipped with heavy-duty motor, a quadrant for quick bevel adjustment to 45 degrees, a loop handle with built-in switch, and patented safety guard and 8½" combination blade.

Literature and prices mailed upon request.

MALL TOOL COMPANY
7737 South Chicago Avenue, CHICAGO, ILL.



FOR VICTORY
BUY
UNITED STATES
SAVINGS
BONDS
AND STAMPS

TWO WAYS
TO BUILD FOR THE FUTURE
WAR SAVINGS BONDS

1. Build Bombers Today
2. Build Nest Eggs for Tomorrow

TECO TIMBER CONNECTORS

1. Make Timber Joints Stronger.
2. Save Time, Materials, Money.

Timber ENGINEERING COMPANY
WASHINGTON, D. C. PORTLAND, ORE.

Modernized..

Beautified..



Buffalo's
Most Congenial
Hotel

● Today, you'll enjoy your stay at Hotel Lafayette more than ever! Extensively remodeled, and redecorated, this fine hotel offers new convenience and comfort—but the friendly hospitality is the same as ever. Excellent food, home-like rooms, reasonable prices. And remember: Hotel Lafayette is Buffalo's most centrally located hotel. Moderate rates: Single \$2.75 up; Double, \$4.50 up; special rates for 4 or more. Write for Folder U-10.

Hotel LAFAYETTE
K. A. KELLY, MANAGER BUFFALO, N. Y.

Better—Quicker—Cheaper

(Continued from page 35)

and 192,000 are still in the planning stage.

During this same period, since July 1, private builders completed 355,000 low cost dwelling units in war centers, and an additional 470,000 that the National Housing Agency did not class as war housing because of their cost, although they are for the most part located within commuting distance of war centers. The average unit cost of the 355,000 lower priced units was \$3,940, whereas the average cost of the 470,000 "higher priced" units was \$5,000.

In time of war, the deciding factor in any operation should be speed and efficiency of operation. Private builders have shown many times before that they are able to go through the housing job better, quicker and cheaper. Housing is one industry which cannot be handled on a remote control basis. Satisfactory building sites available to utilities, transportation and public services are widely scattered. The very nature of building activity is such that the very large mass projects get into all sorts of local complications.

In contrast, the smaller private building jobs can be more quickly and efficiently organized. The local builder knows local customs, material supply sources, construction methods, is able to move ahead much more rapidly. In many cases the private builder has crews of elderly men, such as those employed by T. V. Albert, who have not been willing to leave their home towns. Even after the disrupting events of recent months there are still large numbers of private builders who have the nucleus of good working construction crews. If such builders are given a chance they will produce war housing quicker, better, cheaper by far than the large publicly financed, mass housing projects.

EDITOR'S NOTE: Just at press time, newspapers throughout the country are carrying critical stories on the Federal Public Housing Authority's Winfield Park project described in this article. Senator Harry S. Truman has said that the Department of Justice has been asked to investigate this Winfield defense housing job. Senator Meade of New York at a public hearing labeled the project as one of "sloppy construction." Hugh A. Fulton, counsel for the Senate Committee investigating construction, stated that the original allotment for this housing was \$3,651,000, and John Taylor Eagan, FPHA regional director, testified that the final cost of \$4,392,000 was "reasonably correct." Further, Senator Truman pointed out that preliminary investigation revealed "lack of planning, disregard of costs, and inefficient and improper methods of construction." Because of defects in the construction of their quarters, twenty-eight tenants moved out in October.

Power Equipment Speeds Housing Job

(Continued from page 44)

have six rooms, including three bedrooms. Larger kitchens and dining rooms eliminate some of the objections registered against Title VI houses previously built in this area. In these kitchens, an outstanding feature is the all-electric equipment including Hotpoint table top water heater and cabinet sink. Other highlights of construction and equipment items include frame structure with pine siding exterior and National Gypsum board for interior finish; Texaco 210 lb. asphalt roofing; oak floors except linoleum in kitchen and bath; Devco & Raynolds paint; Crane plumbing fixtures and pipe; Miami bathroom cabinet; G-E wiring, kitchen cabinets, and distillate-burning heater with circulating fan.

Most lots in Brookley Heights are 50 by 160 feet in size. There are two landscaped areas, also a planting strip in front of the project. Streets were graded and sidewalks paved.

With housing at a premium in Mobile, the houses were sold as fast as completed, with prices ranging from \$4,200 to \$4,700. Engel Realty Company, Birmingham, assisted in the sale.

In the Stackhouse organization, the principal jobs are divided as follows: E. G. Stackhouse, president and buyers; R. D. Stackhouse, secretary and office manager; and L. D. Stackhouse, superintendent of construction. The concern furnishes its own architectural and engineering services, drawing plans for the houses, surveying the lots, laying out the streets, etc.

Masonry for War Housing

(Continued from page 47)

a bungalow without basement, containing a living room (11'-3" x 16'-0"), two bedrooms (9'-4" x 13'-0" and 9'-10" x 11'-3"), a kitchen (7'-9" x 11'-3"), a bath, heater room, and four closets. The outside dimensions are 24'-8" x 28'-8". There also is an attractive latticed entrance.

The plumbing, heating, electrical, plastering, roofing, and hardware costs were identical in the estimator's report for the two types of construction. The masonry home saved almost \$100 in materials and labor for painting, and the mill-work came to \$60 less with brick and tile construction, including both materials and labor.

There was, of course, a great saving of lumber in the estimates for the masonry house. The cost of this lumber was \$421 against \$810 for the frame house. Carpenters' labor was \$460, compared with \$743 in the frame estimate. The final saving for the masonry home was in concrete work which cost \$166, compared with \$324 for the frame dwelling. These savings totalled \$990 in favor of masonry construction.

Only in respect to excavating, where there was a difference of \$5, and in flashing and masonry did the estimates for the brick and tile home exceed the cost of frame construction. The frame house had an advantage of \$70 in flashing and of \$1130.67 in masonry, inasmuch as brick and tile were used only in the chimney and flue lining of the frame dwelling.

The additional overall cost of \$237.08 for the masonry home arose almost entirely from higher labor costs, inasmuch as the materials used in the frame dwelling, valued at \$3083.25, cost only \$94.38 less than those used in the masonry home. The cost of labor in the masonry estimate was \$1986.72 as against only \$1865.57 in the frame estimate, a difference of \$121.15. The contractor's profit on the masonry house is \$21.55 more than on the frame house.

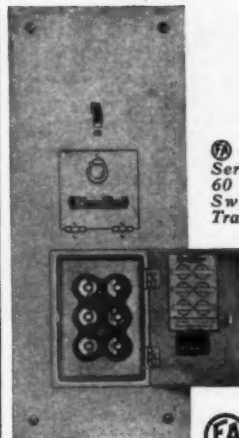
In the District of Columbia in September of this year, masons received \$1.75 per hour, while the rate used for computing carpenter labor was \$1.62½. For the benefit of builders or designers who may wish to check District of Columbia costs against their local labor rates, prevailing rates as used in the estimates were as follows:

Laborers	\$.87½
Painters	1.62½
Sheet metal workers	1.75
Roofers	1.55
Plumbers	1.75
Electricians	2.00

Total lumber requirements were 10,757 board feet for the frame house and 5,435 feet for the masonry home. The frame dwelling required 5½ kegs of nails against 3 kegs for the brick and tile construction. The masonry estimate called for 14,187 brick and 2,460 4x5x12 tile compared with 800 in the frame structure.

The facts developed in this project have been made available to all interested officials in Federal agencies and in the Army and Navy. Copies of the detailed plans and estimates will be sent to readers of the *American Builder* while the supply lasts. There is every indication that brick and tile, together with other lumber substitutes, must and will be used freely in future governmental construction, especially in those areas where brick and tile are produced in large quantities and thus place little or no burden on the Nation's overtaxed transportation facilities. In view of the relatively small difference in cost, it is taken for granted that lumber will be used as sparingly as possible both in permanent and in temporary structures.

Although non-governmental building will be held to a low figure for some months to come because of Federal restrictions, War Production Board officials have made it known that priority applications submitted on form PD-200 will receive much more favorable consideration if the specifications call for a maximum of masonry and a minimum of frame construction. Even those individuals planning new construction within the limits of Conservation Order L-41 will do well to plan on using brick and tile and other substitutes wherever possible, for the supply of lumber is almost certain to be short in many communities until the end of the emergency.



Ⓣ 6-Circuit Safety-type Service Equipment, with 60 Amp. Tumbler Main Switch and Fuse. Bell Transformer space optional.

Adapted to the requirements of the modest bungalow — or of the most elaborate house,

Ⓣ FUSE TYPE SERVICE EQUIPMENT

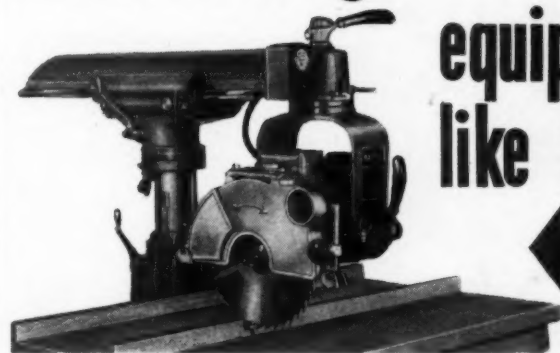
contributes to the low cost of good construction. It is designed to give maximum protection. The box is of galvanized steel. The front, with its pearl gray lacquer finish, is neat and unobtrusive, and easily kept clean. Each unit is compact and pleasingly designed . . . Main switch and distribution circuits are combined in one unit. Capacities: 30 amperes, 115 volt, 2 wire, or 30-100 amperes, 115-230 volt, 3 wire. Available with from 2 to 20 circuits.

Write for Bulletin 63

with description, dimensions, capacities, etc., of Ⓣ Fuse Type and Ⓣ Type A.C. Circuit Breaker Service Equipment.



Sub-contracts go to Builders equipped like this



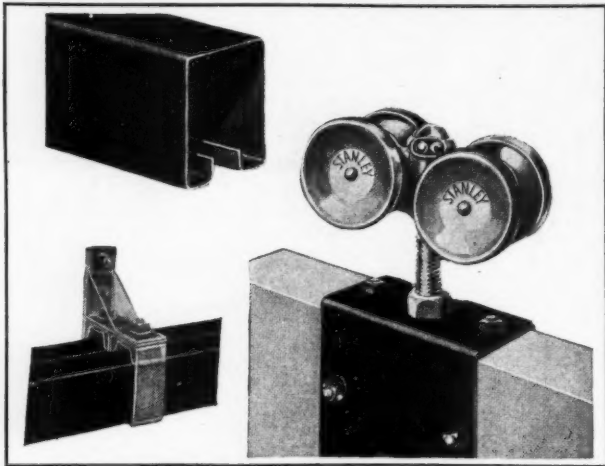
Landing war contracts calls for close-margin bids—plus facilities to handle volume production and meet specifications for quality and delivery.

A tough combination? Not when you're equipped with the Walker-Turner Radial Saw! This versatile machine puts your woodworking shop on a mass production basis. It cross-cuts and rips, dadoses, compound miters, shapes, tenons and routs wood . . . also cuts metals, plastics, tile, terra cotta, transite, etc.

A patented geared motor gets the shaft closer to work, permitting smaller blades with greater rim force and faster cutting. Sliding ram permits unobstructed visibility. Many other features . . . all at the low price of \$354.50. Prompt delivery for war work. Write for detailed literature. Walker-Turner Co., Inc., 10122 Berckman St., Plainfield, N. J.



STANLEY HARDWARE For Rolling or Sliding Doors



3 Sizes meet all needs for Doors up to 1000 Pounds

Only three sizes, X, Y, and W, of Stanley No. 2641 Track and No. 2650 Hangers, handle all common sliding doors weighing up to 350, 700 and 1000 pounds, respectively. X track is 16 gauge, Y is 14 gauge and W is 13 gauge.

Stanley Hangers have accurate two-way adjusting nut and ball bearing swivels. Stanley "Hold-Fast" Track Clamps hold sections of track rigid and perfectly aligned. Send for catalog describing the complete line of Stanley Hardware.

THE STANLEY WORKS... NEW BRITAIN, CONN.

STANLEY

TRADE MARK

HARDWARE FOR CAREFREE DOORS

For "CABINET-BUILT" FRAMING!



For tight-fitting, accurately-cut framing work, at lower cost, investigate the Wallace No. 1 Radial Saw.

With the exclusive Wallace ANGULATOR, it saws rafters without marking and with only ONE handling! Zips thru every kind of sawing cut, plus all milling operations such as dadoing, grooving, ploughing, routing, shaping, fluting, and cutting tile and brick.

Saves \$75 to \$200 on average homes. Portable—easily carried from job to job. For extra profits, write today for leaflets on the No. 1 Radial Saw.

J. D. WALLACE & CO.
136 So. California Ave., Chicago, Ill.

PROMPT DELIVERY ON UNIVERSAL LEVEL TRANSIT

Patent
Ball Bearing
Center



Ideal for Defense Plant and
Large Construction Jobs

PROMPT DELIVERY WITH Preference Rating

Powerful 12" Telescope—Price complete with Tripod, Carrying Case, Sunshade, and Dust Cap \$115.00, plus \$4.00 Excise Tax. Can be furnished with a compass at \$12.50 Extra.

Write for free booklet—HOW TO
LAY OUT BUILDING LOTS

Expert Repairing of all makes of instruments

DAVID WHITE CO. 311 W. Court St.,
Milwaukee, Wis.

New WPB War Housing Standards

(Continued from page 49)

B. Designs shall be based on the use of standard sizes. All off-standard workings shall be avoided.

C. The lowest grade which is practicable for the purpose, and all available species which can serve the purpose, shall be specified.

D. The use of wood wall sheathing shall not be permitted when other materials such as fibre, insulation, and gypsum boards are obtainable.

E. The use of plywood, except for built-in fixtures and gusset plates, is prohibited in dwelling structures, the frames of which are fabricated at the site.

F. The use of softwood finished flooring or softwood sub-flooring is prohibited.

G. Roof sheathing under wood shingles shall be spaced in accordance with the shingle exposure but with a minimum space of 2" between the shingle lath or sheathing.

H. Beveled siding up to and including 8" in width is the only wood siding permitted.

I. Purchase specifications shall not restrict the moisture content.

6. Heating plants shall not exceed the following limits:

A. For one, one and one-half, and two-story structures, consisting of single-family detached, semi-detached, and row dwellings and multi-family flats or row type dwellings:

(1) Where heat loss of dwelling unit is less than 40,000 Btu, one of the following units may be used:

- (a) One floor furnace per dwelling unit.
- (b) One pipeless furnace per dwelling unit.
- (c) One space heater per dwelling unit.
- (d) One chimney heater range.

(2) Where heat loss of dwelling unit in one-story structures is 40,000 Btu or more, and for any heat loss permitted by the Housing Critical List in two-story structures, one of the following units may be used:

- (a) One gravity distribution furnace per dwelling unit.
- (b) One space heater per dwelling unit.
- (c) One chimney heater range per dwelling unit.

(d) One chimney furnace or other forced circulation warm air furnace per dwelling unit in basement-less one-story 3 bedroom dwelling units and in any basement-less two-story structure.

(e) One floor furnace per dwelling unit. Additional floor furnace may be authorized, if necessary, but not in excess of the heat loss limitations established by the War Housing Critical List.

B. For one and two-story structures, excluding two-story row type dwelling units, where each heating system serves four or more dwelling units, and where less than 25% of the dwelling units in such structures are lower than two stories, one of the following units may be used:

One pipe steam or one pipe forced hot water system with radiators provided that the weight of the system shall not exceed the weight determined by the following formula allowing the heat loss of 66 Btu per square foot of dwelling area:

Net Btu Loss of Structure:	Pounds of Metal per 1000 Btu
Up to 175,000	37
175,000 to 250,000	36
250,000 to 350,000	35
350,000 to 500,000	34
500,000 to 700,000	33
Over 700,000	32

C. For dormitory type apartment structures:

(1) Forced circulation warm air furnace system.

(2) One pipe steam or one pipe forced hot water system with radiators.

D. For dormitory structures:

(1) Forced circulation warm air furnace system.

7. Plumbing installations shall be limited as follows:

A. In single-family detached, semi-detached and row type dwelling units, bathroom and kitchen plumbing shall be arranged so that not more than one plumbing stack per unit will be required. This will permit the bathroom back to back with the kitchen in one-story dwellings and the bathroom over the kitchen in two-story dwellings.

B. In multi-family dwellings the kitchen and bathroom plumbing arrangements shall be located so as to use a minimum amount of critical materials.

How to Repair Steel Sash

(Continued from page 57)

it does not soak in, as on wood. Therefore don't skimp on a good priming coat.

There are many cases today where, because of the inability to obtain new steel windows, old buildings containing steel windows are being wrecked and the steel sash are being removed to a new location and reused in a new building. Many buildings must still have steel windows. Where fires or explosives are a hazard, such as in airplane hangars, paint shops and similar buildings, steel windows are almost a necessity. While not generally known in peacetime nor generally advertised, one of the outstanding features of steel windows is their exceptionally high salvage value. It is not unusual for steel windows as old as 25 years to be removed from an existing building and relocated.

For example there is on record a job of removing some old steel windows which occurred a few months ago. The building was an old foundry building located in East St. Louis, Illinois, made up almost entirely of structural steel and steel sash; it was torn down and removed to a site across the Mississippi River in St. Louis. It should be pointed out here that the removal and reuse of steel windows is pretty well dependent upon the fact that the windows be in multiple openings, that is to say, that more than one steel sash occur in a single opening. Where the steel window is entirely surrounded by a masonry wall it is difficult to remove, but where there are long runs of steel sash connected by one or more steel mullions, the removal is comparatively easy.

From the East St. Louis building a total of 854 steel windows of various makes were removed. Out of this total 112 units were reused in one building and 180 units were reused in a second building. Four hundred and sixty-nine of the remaining units were in good condition but were not reused. Instead they were stored for future use. The remaining 93 windows were reported to be so badly rusted that they represented no more than junk value. This means that approximately 89 per cent of the windows removed were reusable.

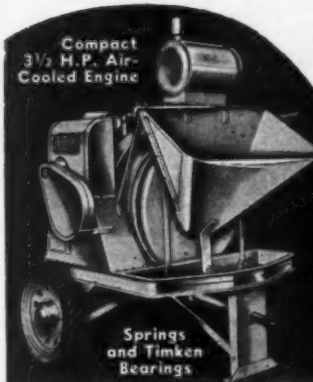
In removing the sash the steel mullions which connected them were first unbolted and taken down. Portions of the sill were broken away and the windows after being released from the head, were simply slipped down and out of the opening. In this particular case no attempt was made to salvage the glass because most of it was already broken. In addition the old glass was clear and opaque glass was required for the new job. The windows were transported across the river and a small outdoor shop was set up. The sash were laid individually on horizontal tables. At the first table the remaining splinters of glass and putty holding the glass were removed by means of cold chisels.

After the glass had been entirely removed each window was taken to the second table where several workmen scraped away the rust and old paint, using cold chisels, files, paint remover and wire brushes.

The final operation was conducted on the third table by several men with portable grinding wheels which had been equipped with a revolving wire brushing wheel. Here on the third table the wire brushing wheels removed all the final traces of dirt, accumulated paint, rust, glass and putty on the putty side, and then the sash were turned on the opposite side and the motor driven wire brushes removed most of the paint and loose scale from that side.

Following this third operation the sash were set upright and given a coat of red lead and oil paint. From this yard they were transported to the building site and installed in a new building. It is reported that most of the old hardware was in very good condition and was reused. The ventilators were eased up with graphite grease where necessary, new opaque glass was installed and the final job given two coats of grey lead and oil paint.

It is interesting to know some of the main reasons why steel sash have a relatively high salvage value. Their construction is rigid enough so that even with the abuse attendant to removing, they come out of the building in one piece. Occasionally a broken muntin bar or a broken frame joint has to be rewelded. The pivots, sliding shoes or supporting arms of the steel ventilators likewise are of such construction and have been riveted or welded in place so that they withstand the abuse that comes with removing and re-erecting.

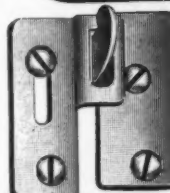


30% to 40% MORE CONCRETE with this MIXER!

Load the Measuring Batch Hopper (12" lower) while you mix and discharge — fast as power loader. Criss-Cross "Re"-Mix Drum, Accurate Measuring Tank (siphon type). End discharge design. Get catalog, prices. The Jaeger Machine Co., 521 Dublin Ave., Columbus, Ohio.

JAEGER 3 1/2 S SPEEDLINE

KEES HANGERS FOR FULL AND HALF LENGTH SCREENS



No part of the hanger extends above the top of the screen. 14 gauge steel-black baked enamel with screws and nails. If your dealer can't

No. 214—Hook Member Mortised



★ FOR VICTORY ★

Kees products are going into cantonments, defense housing, munition plants, and Army and Navy equipment. Subject to war regulations, we will continue to supply our hardware through retail hardware and building material dealers.

F. D. KEES MFG. CO.

Box 93 Beatrice, Nebraska

KINNEAR BIFOLD DOOR

This rugged, quick-acting door is giving low-cost service in all types of buildings. Small operating space; large sash area types of buildings. Small operating space; large sash area permitting plenty of light. Two horizontally hinged sections pivot smoothly from brackets at upper corners. Clears entire opening, saves floor and wall space. Torsion spring counterbalance assures easy, rapid action. All sizes; wood or all metal. Easy to install. Write today. The Kinnear Mfg. Co., 1560-80 Fields Ave., Columbus, Ohio.



Saving Ways in Doorways
KINNEAR
ROLLING DOORS

Set of BLUE PRINTS and

Free BOOK

"HOW TO READ BLUE PRINTS"

This Free Trial Lesson on "HOW TO READ BLUE PRINTS," and a set of blue prints plans—sent to show you how this 39-year-old School for Builders makes it easy for men in the building industry to lay out and run jobs, read blue prints, estimate costs, superintend construction, etc. Drawing of plans included if wanted.

LEARN AT HOME IN SPARE TIME

Men with this training are needed now on building construction work. This knowledge leads to promotion. Building contractors urge employees to get this training. For Free Trial Lesson address:

CHICAGO TECH COLLEGE

S-125 Tech Building

2000 S. Michigan Ave., Chicago, Ill.



FIRZITE

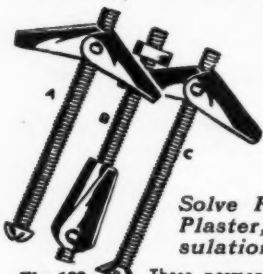
THE SUPERIOR FIR PLYWOOD PREFINISHER

FIRZITE tames "wild" grain, reduces hairline checking. Gives Fir Plywood a rich smoother finish. Especially necessary on Exterior Phenolic Resin Bonded Fir Plywood. Build profits with this Nationally accepted finish.

● Write on firm letterhead for details and free FIRZITE treated panel.



CAN YOU SUBSTITUTE



**These Stock Items
For Hard-to-Get
ANCHORS?**

Shipped on LOW PRIORITY

PAINE TOGGLE BOLTS

Solve Fastening Problems in Lath and Plaster, Hollow Tile, Sheet Rock and Insulation Boards.

Fig. 123

These permanent fastenings will outlast the material in which they are used. When tightened, wing edges engage bolt thread preventing bolt from working loose.

Your Hardware Dealer can supply you. Catalog free upon request.

THE PAINE CO., 2959 CARROLL AVE., CHICAGO, ILLINOIS

Dependability . . .

*the reason Wappat Saws are
called for in war time building*

Fred W. Wappat Portable Electric Hand Saws are designed and built to be sturdy, powerful, cool-running, balanced for easy operation. Their unusual serviceability is proving itself with the men on vital war time construction work in the United States and in its outposts.

Fred W. Wappat . 7323 Penn Avenue, Pittsburgh, Pa.
Accessories and Service for all Wappat and Alta Tools

There's Money with DeLuxe For You Modernizing KITCHENS



Here is a building outlet which is not restricted. Homes everywhere are prospects. Every housewife wants a modern kitchen. DeLuxe Kitchen Units (made of wood) bring every advantage of convenience and beauty—at lowest possible cost. Available in a wide selection to fit any floor plan. Write today for complete catalog showing typical installations—and name of nearest distributor. Address Dept. AB-1242.

FARLEY & LOETSCHER MFG. CO.
Sash, Doors, Blinds, Frames, Mouldings
"Qualitybilt Woodwork"
DUBUQUE, IOWA

INDEX TO ADVERTISERS DECEMBER, 1942

A

Adam Electric Company, Frank.....	85
Allith-Prouty, Inc.....	80
American Brass Company, The.....	4-5
American Builder.....	14-22-23-78-82
American Floor Surfacing Machine Co., The.....	89
American Lumber & Treating Company.....	74
American Saw Mill Machinery Co.....	13
Anaconda Copper Mining Co.....	4-5
Arkansas Soft Pine Bureau.....	75

B

Barclay Manufacturing Company, Inc.....	67
Bathe-Rite Division.....	79
Bradley Lumber Co. of Arkansas.....	3
Breinig Brothers, Incorporated.....	88
Bruce Co., E. L.....	71

C

Carboloy Co., Inc.....	89
Celotex Corporation, The.....	2
Chicago Tech. College.....	87
Construction Machinery Co.....	89
Crane Co.....	17

D

Douglas Fir Plywood Association.....	72
--------------------------------------	----

F

Farley & Loetscher Mfg. Co.....	88
---------------------------------	----

G

General Ceramics Company.....	24
-------------------------------	----

H

Heatilator, Inc.....	83
Homasote Company.....	77

I

Insulite.....	29
---------------	----

J

Jaeger Machine Co., The.....	87
Johns-Manville.....	18

K

Kees Manufacturing Co., F. D.....	87
Kinnear Manufacturing Co., The.....	87
Knapp Bros. Manufacturing Co.....	68
Kwix-Mix Concrete Mixer Co.....	82

L

Lafayette Hotel	84
Laucks, Inc., I. F.	66
Lehigh Portland Cement Company	19
Libbey-Owens-Ford Glass Company	27
Louisville Cement Company, Incorporated	11

M

Majestic Co.	89
Mall Tool Company	83
Mengel Company, Incorporated, The	65
Milwaukee Stamping Co.	79
Mueller Furnace Company, L. J.	15

N

National Gypsum Company	8
National Manufacturing Co.	4th Cover

O

Overhead Door Corporation	3rd Cover
---------------------------------	-----------

P

Paine Co., The	88
Pecora Paint Company, Inc.	81

R

Red Cedar Shingle Bureau	76
Rowe Manufacturing Co.	61
Rilco Laminated Products, Inc.	21

S

Skillsaw, Inc.	81
Sloan Valve Company	63
Smith, Landon P.	82
Solvay Sales Corporation	70
Sonneborn & Sons, Inc., L.	80
Stanley Works, The	86

T

Timber Engineering Company	84
Treasury Dept.	28

U

United States Steel Corp. Subsidiaries	90
Universal Atlas Cement Company	90
Upton Company, The	6-30

V

Victor Electric Products, Inc.	79
-------------------------------------	----

W

Wagner Manufacturing Company	78
Walker-Turner Co., Inc.	85
Wallace & Co., J. D.	86
Wappat, Fred	88
Western Pine Association	73
Westinghouse Electric & Manufacturing Company	10
Weyerhaeuser Sales Co.	21
Wheeler Osgood Sales Corp.	69
White Co., David	86

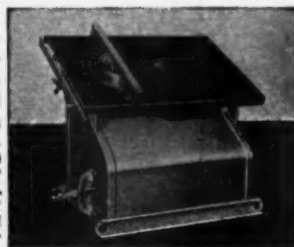


MIXERS
BATCHERS
PUMPS
SAW RIGS
HOISTS
CARTS
BARROWS

KOST KUTTER SAWS!

Streamlined ... Fast Cutting ... Sturdy!

Contractor says:
"There's no vibration. The engine floats on rubber and springs. I like its portability, too. Get information on CMC's 3 popular size power saws ... Kost Kutter, Kost Kutter Jr. and Heavy Duty Power Sawyer."



CONSTRUCTION MACHINERY CO.
Waterloo, Iowa



SAVE MAN POWER WITH AN AMERICAN SANDER

The War Housing Program calls for SPEED whether you are sanding the floors of a 500 house project or a single bungalow. The American Standard floor sander through actual performance on recent housing jobs has proven itself 25 to 40% faster than machines formerly used. Investigate the greater production possibilities with latest High-Speed American equipment. Write today for details and prices.

THE AMERICAN FLOOR
SURFACING MACHINE CO.
511 So. St. Clair St., Toledo, Ohio

Majestic BUILDING PRODUCTS

After our rapidly diminishing stocks are gone, we shall still be faithfully serving our old customers. Only in a different way! In our 100% war work we will be doing everything in our power to make future home building a reality. Also, this wartime experience will produce improvements and developments in our extensive line—insuring even better MAJESTIC PRODUCTS for the future. Also, we are grateful to have a part in our Country's drive to VICTORY.

NO MORE RAGGED HOLES OR SPLINTERED WORK!

CARBOLOY DRILL-POINTS MAKE CLEAN
ACCURATE HOLES IN CONCRETE, TILE, ETC.

Stop complaints about unsightly appearance of holes in partitions, walls, floors, ceilings, etc. Use Carboloy Masonry Drill-Points for concrete, tile, porcelain, brick, slate, etc. Won't splinter fragile work. Drills clean, accurate holes free from ragged edges.

You can do a better job and a faster job! Carboloy drill-points drill 50%—75% faster. Eliminate all slow, noisy hand chiseling. Stays sharp for long hours of continuous use.

No special equipment needed. Use in any rotary drill.

CARBOLOY
MASONRY DRILL-POINTS



Carboloy Co., Inc.
11102 E. 8 Mile Rd., Detroit
Send free leaflet on Carboloy
Masonry Drill-Points, for drill-
ing concrete 75% faster.

Name _____
Company _____
Street _____
City _____ State _____



AT HOME WITH DOUGLAS

...and a topcoat of modern STUCCO



DOUGLAS Aircraft has modernized its home in Santa Monica and now is as up-to-date as its far-famed bombers. This attractive building has a top-coat of modern stucco made with Atlas White Cement.

Modern stucco adds a crisp, clean-cut appearance to large and small buildings. It also provides long-lasting protection. But there's another reason for its use today. In the Douglas Building, stucco was placed directly over monolithic concrete without reinforcing mesh. That saved steel. In homes, hospitals, hangars and similar

structures, modern stucco is applied directly over monolithic concrete, concrete block, cinder block and tile. This too saves steel... plus other materials vitally needed for our war effort.

In addition, the basic advantages of modern stucco are worth counting on. Stucco gives your building a durable facing that resists all weather. It is firesafe... an added protection. Low initial cost and little or no expense for upkeep are welcome economies. And many pleasing colors and textures may readily be applied.

Consider your own next job of fac-

Modern, 2-story office building of Douglas Aircraft Company at Santa Monica, Cal. Architect: Joe M. Estep, Santa Monica. Stucco contractor: W. D. Lindsay, Los Angeles. California stucco made with Atlas White Cement supplied by California Stucco Co., Los Angeles.

ing. Modern stucco made with Atlas White Cement, plain or water-proofed, meets many a demand today. Specify it. Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York City.

OFFICES: New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Birmingham, Waco.

ATLAS WHITE CEMENT

A UNIVERSAL ATLAS PRODUCT



AB-8-31

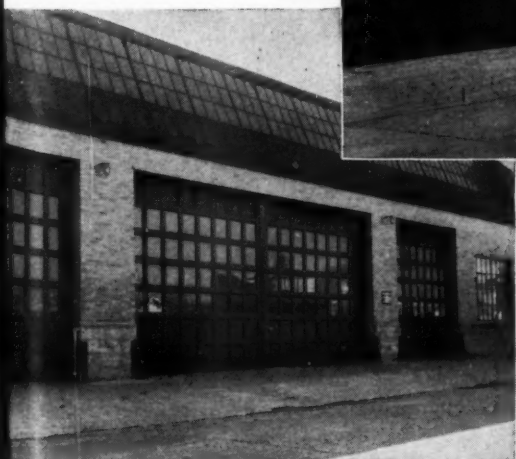
A large, muscular hand wearing a wristwatch holds a sign that reads "When Minutes Count- DOORS ARE IMPORTANT!".

When Minutes Count-
**DOORS ARE
IMPORTANT!**

Buy
**WAR BONDS
and STAMPS**



COPYRIGHT 1942, OVERHEAD DOOR CORPORATION.



and locked, The "OVERHEAD DOOR"
tamper-proof barrier. Open, it leaves all
ace productive.

Time-saving, space-saving "OVERHEAD DOORS" speed up the loading or storage of materiel in army, navy, marine and coast guard buildings—eliminate traffic congestion—keep the wheels running smoothly in war production plants. Specify the *quality* door that gives *lasting service* . . . The "OVERHEAD DOOR" with the Miracle Wedge, built in any size to fit any opening. Reliable electric operation is provided for any door, with control by push button, key switch or pull station.

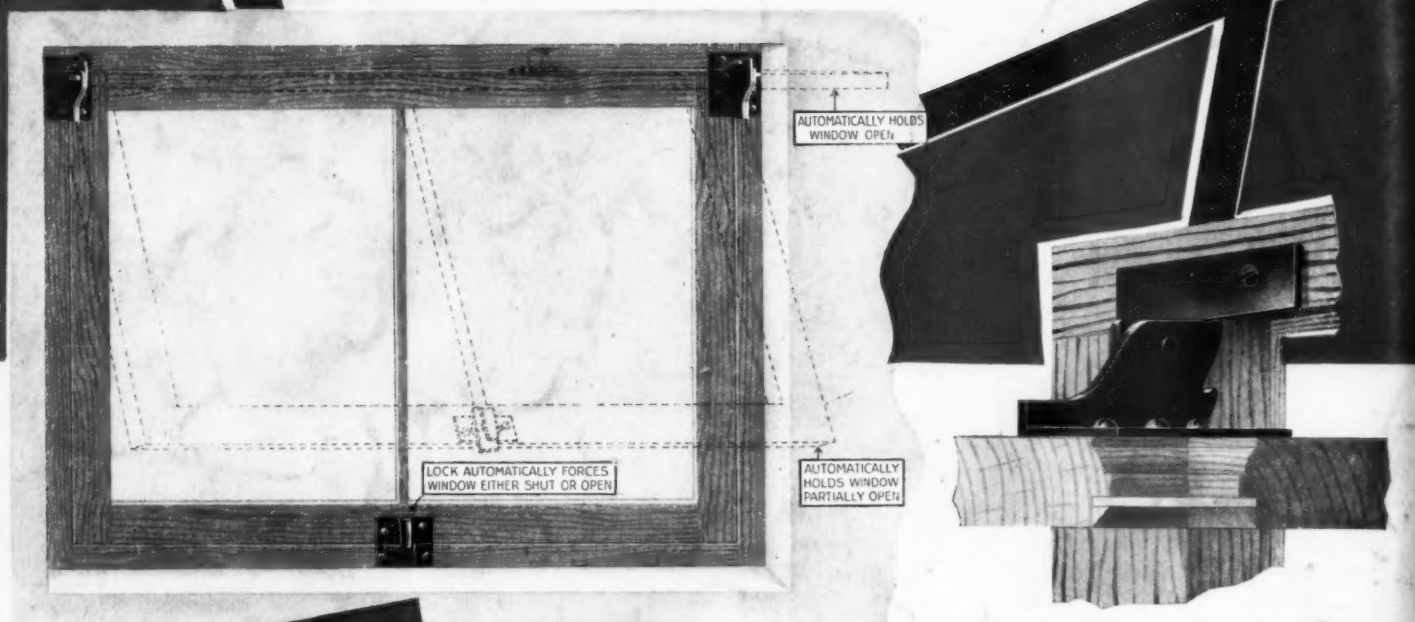
The **OVERHEAD DOOR**
TRADE MARK
WITH THE
MIRACLE WEDGE

OVERHEAD DOOR CORPORATION, Hartford City, Indiana, U. S. A.





a Victory BASEMENT WINDOW SET



National
Builders Hardware

No. 71-Window Set

See Your National Dealer

Your National Dealer can help you in securing National Builders Hardware for jobs on which you have the required priority rating—see him today, let him check your hardware list. His help is yours for the asking.

When you plan for future building plan to use National Builders Hardware. We manufacture a complete line from Garage Door Sets to Parliament Butts.

Basement sash of wood, is a *must* in war houses. Equip these wood basement sash with National No. 71—Automatic Basement Window Sets. This set gives highest satisfaction wherever used. The lock automatically forces window either shut or open, the hinges are so constructed that they hold the window partially open or fully open. They give a snug-fitting weather-tight job and are extremely easy to install. Packed one set in a carton *with screws*.

NATIONAL MANUFACTURING CO. STERLING, ILLINOIS

